



**DEDICATED TO FULFILLING THE GOVERNMENT'S NEEDS**

**General Services Administration  
Federal Supply Service  
Authorized Federal Supply Schedule (FSS) Pricelist**

**Multiple Award Schedule  
Information Technology Category**

**Contract No.: 47QTCA18D001T**

**Contract Period:** November 15, 2017 to November 14, 2022  
(Potential Option Year(s) through November 14, 2037)

**Pricelist Effective:** August 28, 2020 **Mod:** A824

**Futron Incorporated**

14067 Crown Ct., Woodbridge, VA, 22193

**Contract Admin:** June Adams

**Phone:** (571) 402-3211

**Fax:** (703) 580-4829

**Email:** [jadams@futroninc.com](mailto:jadams@futroninc.com)

**Web:** [www.futroninc.com](http://www.futroninc.com)

**CAGE:** 062H2

On-line access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order are available through GSA Advantage!, a menu-driven database system. The INTERNET address GSA Advantage! is: [GSAAdvantage.gov](http://GSAAdvantage.gov)

For more information on ordering from Federal Supply Schedules click on the FSS Schedules button at [fss.gsa.gov](http://fss.gsa.gov)

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# Customer Information

- 1a. Table of awarded special item number(s) with appropriate cross-reference to item descriptions and awarded price(s).

SIN	Description
33411	Purchasing of New Electronic Equipment
54151S	Information Technology Professional Services
811212	Maintenance of Equipment, Repair Services and/or Repair/Spare Parts
OLM	Order level Materials

- 1b. Identification of the lowest priced model number and lowest unit price for that model for each special item number awarded in the contract.

SIN	Part#	GSA Price
33411	Fut-050	\$0.10/ft
54151S	FUL083	\$39.86/hr
811212	FUT-MAN-01	\$1,632.57

- 1c. If the Contractor is proposing hourly rates, a description of all corresponding commercial job titles, experience, functional responsibility and education for those types of employees or subcontractors who will perform services shall be provided. **Not applicable to products**
2. Maximum order. **\$500,000 for all SINs**
3. Minimum order **\$100.00**
4. Geographic coverage (delivery area). **Domestic (CONUS + HI, PR, and AK)**
5. Point(s) of production. **USA, CA, DE**
6. Discount from list prices or statement of net price. **Please see our *GSA Advantage!* listing for pricing and additional details. Prices shown herein are net (discount deducted)**
7. Quantity discounts. **1% for orders over \$150,000**
8. Prompt payment terms. **1% 10 days, Net 30, Information for Ordering Offices: Prompt payment terms cannot be negotiated out of the contractual agreement in exchange for other concessions**
- 9a. Notification that Government purchase cards are accepted at or below the micro- purchase threshold. **YES, Government Purchase Cards are accepted below the micro-purchase threshold.**
- 9b. Notification whether Government purchase cards are accepted or not accepted above the micro-purchase threshold. **YES, Government Purchase Cards are accepted above the micro-purchase threshold.**
10. Foreign items. **Please see our *GSA Advantage!* listing for specific Country of Origin details.**
- 11a. Time of delivery. **30 days or as determined per task order**
- 11b. Expedited Delivery. **Contact Contractor**
- 11c. Overnight and 2-day delivery. **Contact Contractor**
- 11d. Urgent Requirements. **Contact Contractor.**
12. F.O.B. point(s). **Destination**

- 13a. Ordering address(es). **Same as contractor's address.**
- 13b. Ordering procedures: For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's) are found in Federal Acquisition Regulation (FAR) 8.405-3.
14. Payment address(es) **Same as contractor's address.**
15. Warranty provision. **Standard Commercial Warranty.**
16. Export packing charges, if applicable. **N/A**
17. Terms and conditions of Government purchase card acceptance (any thresholds above the micro-purchase level). **YES, Government Purchase Cards are accepted above the micro-purchase threshold.**
18. Terms and conditions of rental, maintenance, and repair (if applicable). **N/A**
19. Terms and conditions of installation (if applicable). **N/A**
20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable). See Warranty for Repair Parts, If Applicable. **N/A**
- 20a. Terms and conditions for any other services (if applicable) **N/A**
21. List of service and distribution points (if applicable). **N/A**
22. List of participating dealers (if applicable). **N/A**
23. Preventive maintenance (if applicable). **N/A**
- 24a. Special attributes such as environmental attributes (e.g., recycled content, energy efficiency, and/or reduced pollutants). **None**
- 24b. If applicable, indicate that Section 508 compliance information is available on Electronic and Information Technology (EIT) supplies and services and show where full details can be found. The EIT standards can be found at: <https://www.section508.gov/> **N/A**
25. Data Universal Number System (DUNS) number. 878896687
26. Notification of registration in System for Award management (SAM) database.  
**Contractor is Active in SAM      Exp Date: 08/29/2021**

# ITC standard regulations

## 1) Organizational Conflicts Of Interest

### a) Definitions.

"Contractor" means the person, firm, unincorporated association, joint venture, partnership, or corporation that is a party to this contract.

"Contractor and its affiliates" and "Contractor or its affiliates" refers to the Contractor, its chief executives, directors, officers, subsidiaries, affiliates, subcontractors at any tier, and consultants and any joint venture involving the Contractor, any entity into or with which the Contractor subsequently merges or affiliates, or any other successor or assignee of the Contractor.

An "Organizational conflict of interest" exists when the nature of the work to be performed under a proposed ordering activity contract, without some restriction on ordering activities by the Contractor and its affiliates, may either (i) result in an unfair competitive advantage to the Contractor or its affiliates or (ii) impair the Contractor's or its affiliates' objectivity in performing contract work.

b) To avoid an organizational or financial conflict of interest and to avoid prejudicing the best interests of the ordering activity, ordering activities may place restrictions on the Contractors, its affiliates, chief executives, directors, subsidiaries and subcontractors at any tier when placing orders against schedule contracts. Such restrictions shall be consistent with FAR 9.505 and shall be designed to avoid, neutralize, or mitigate organizational conflicts of interest that might otherwise exist in situations related to individual orders placed against the schedule contract. Examples of situations, which may require restrictions, are provided at FAR 9.508

## 2) Services Performed

a) All services performed by the Contractor under the terms of this contract shall be as an independent Contractor, and not as an agent or employee of the ordering activity.

b) The Contractor shall commence performance of services on the date agreed to by the Contractor and the ordering activity.

c) The Contractor agrees to render services only during normal working hours, unless otherwise agreed to by the Contractor and the ordering activity.

3) **Travel.** Any Contractor travel required in the performance of services must comply with the Pub. L. 99-234 and FAR Part 31.205-46, as applicable, in effect on the date(s) the travel is performed. Established Federal Government per diem rates will apply to all Contractor travel.

## 4) Warranty

a) Unless otherwise specified in this contract, the Contractor's standard commercial warranty as stated in the contract's commercial pricelist will apply to this contract.

b) The Contractor's commercial guarantee/warranty shall be included in the Commercial Supplier Agreement to include Enterprise User License Agreements or Terms of Service (TOS) agreements, if applicable.

c) Except as otherwise provided by an express or implied warranty, the Contractor will not be liable to the ordering activity for consequential damages resulting from any defect or deficiencies in accepted items.

<b>Regulation Number</b>	<b>Regulation Title/Comments</b>
52.222-46	EVALUATION OF COMPENSATION FOR PROFESSIONAL EMPLOYEES (FEB 1993)
52.222-48	EXEMPTION FROM APPLICATION OF THE SERVICE CONTRACT LABOR STANDARDS TO CONTRACTS FOR MAINTENANCE, CALIBRATION, OR REPAIR OF CERTAIN EQUIPMENT CERTIFICATION (MAY 2014)
52.223-19	COMPLIANCE WITH ENVIRONMENTAL MANAGEMENT SYSTEMS (MAY 2011)
52.223-2	AFFIRMATIVE PROCUREMENT OF BIOBASED PRODUCTS UNDER SERVICE AND CONSTRUCTION CONTRACTS (SEP 2013)
52.229-1	STATE AND LOCAL TAXES (APR 1984)
52.222-62	PAID SICK LEAVE UNDER EXECUTIVE ORDER 13706 (JAN 2017)
52.223-13	ACQUISITION OF EPEAT - REGISTERED IMAGING EQUIPMENT (JUN 2014)
52.223-14	ACQUISITION OF EPEAT® - REGISTERED TELEVISIONS (JUN 2014)
52.223-16	ACQUISITION OF EPEAT® - REGISTERED PERSONAL COMPUTER PRODUCTS (OCT 2015)
552.238-115	SPECIAL ORDERING PROCEDURES FOR THE ACQUISITION OF ORDER-LEVEL MATERIALS (MAY 2019)
552.238-107	TRAFFIC RELEASE (SUPPLIES) (MAY 2019)
552.238-73	IDENTIFICATION OF ELECTRONIC OFFICE EQUIPMENT PROVIDING ACCESSIBILITY FOR THE HANDICAPPED (MAY 2019)
552.238-86	DELIVERY SCHEDULE (MAY 2019)
552.238-89	DELIVERIES TO THE U.S. POSTAL SERVICE (MAY 2019)
552.238-90	CHARACTERISTICS OF ELECTRIC CURRENT (MAY 2019)
552.238-91	MARKING AND DOCUMENTATION REQUIREMENTS FOR SHIPPING (MAY 2019)
552.238-92	VENDOR MANAGED INVENTORY (VMI) PROGRAM (MAY 2019)
552.238-93	ORDER ACKNOWLEDGMENT (MAY 2019)
552.238-94	ACCELERATED DELIVERY REQUIREMENTS (MAY 2019)

# GSA PRICE LIST

## Connectors and Cabling SIN 33411

### Premise Connectivity Components

#### CONNECTORS

ITEM NO.	DESCRIPTION	UNIT	PRICE (\$)
Fut-001	Category 5E 24 Port Patch Panel 110 style	EA	\$ 186.81
Fut-002	Category 5E 48 Port Patch Panel 110 style	EA	\$ 316.33
Fut-003	Category 5E RJ-45 Jack 568 A/B	EA	\$ 5.93
Fut-004	Single Port Faceplate	EA	\$ 1.88
Fut-005	Dual Port Faceplate	EA	\$ 1.98
Fut-006	Quad Faceplate	EA	\$ 2.07
Fut-007	Box Eliminator (flush applications)	EA	\$ 1.07
Fut-008	Surface mount box	EA	\$ 6.13
Fut-009	Surface mount raceway 8' section	EA	\$ 16.01
Fut-010	Raceway coupler	EA	\$ 1.01
Fut-011	Raceway flat 90 degree	EA	\$ 1.01
Fut-012	Raceway drop ceiling connector	EA	\$ 2.61
Fut-013	Category 6 24 port patch panel 110 style	EA	\$ 240.18
Fut-014	Category 6 48 Port Patch Panel 110 style	EA	\$ 346.93
Fut-015	Category 6 RJ-45 Jack 568 A/B	EA	\$ 7.80
Fut-016	24 Port Fiber Optic Patch Panel	EA	\$ 209.58
Fut-017	48 Port Fiber Optic Patch Panel	EA	\$ 304.23
Fut-018	72 Port Fiber Optic Patch Panel	EA	\$ 346.93
Fut-019	M/M Fiber Optic Connector Epoxy	EA	\$ 7.20
Fut-020	S/M Fiber Optic Connector Epoxy	EA	\$ 10.14
Fut-021	Fiber Optic connector panel ( 6 PORT)	EA	\$ 50.70
Fut-022	66-Style termination block ( 50 pr.)	EA	\$ 10.40
Fut-023	110-style termination block (50 pr.)	EA	\$ 20.01
Fut-024	7' free standing relay rack	EA	\$ 154.79

**CABLES**

ITEM NO.	DESCRIPTION	UNIT	PRICE (\$)
Fut-050	Category 5E 4 Pair UTP Non-Plenum	FT	\$ 0.10
Fut-051	Category 5E 4 Pair UTP Plenum	FT	\$ 0.20
Fut-052	Category 5 25 Pair UTP Non-Plenum	FT	\$ 1.34
Fut-053	Category 5 25 Pair UTP Plenum	FT	\$ 2.67
Fut-054	Category 6 4 Pair UTP Non-Plenum	FT	\$ 0.13
Fut-055	Category 6 4 Pair UTP Plenum	FT	\$ 0.37
Fut-056	Category 3 25 pair non-plenum	FT	\$ 0.26
Fut-057	Category 3 50 pair non-plenum	FT	\$ 0.48
Fut-058	Category 3 100 pair non-plenum	FT	\$ 0.80
Fut-059	Outside gel-filled 25 pair	FT	\$ 0.79
Fut-060	Outside gel-filled 50 pair	FT	\$ 1.61
Fut-061	Outside gel-filled 100 pair	FT	\$ 2.15
Fut-062	Outside gel-filled 200 pair	FT	\$ 3.92
Fut-063	6 strand M/M non-plenum Fiber optic cable	FT	\$ 1.02
Fut-064	12 strand M/M non-plenum Fiber Optic cable	FT	\$ 1.61
Fut-065	24 strand M/M non-plenum Fiber Optic cable	FT	\$ 2.84
Fut-066	Gel-filled 6 strand M/M Fiber Optic cable	FT	\$ 1.62
Fut-067	Gel-filled 12 strand M/M Fiber Optic cable	FT	\$ 2.94
Fut-068	Gel-filled 24 strand M/M Fiber Optic cable	FT	\$ 3.66
Fut-069	6 strand S/M non-plenum Fiber Optic cable	FT	\$ 1.33
Fut-070	12 strand S/M non-plenum Fiber Optic cable	FT	\$ 2.40
Fut-071	Gel-filled 6 strand S/M Fiber optic cable	FT	\$ 1.86
Fut-072	Gel-filled 12 strand S/M Fiber Optic cable	FT	\$ 2.55
Fut-073	Gel-filled 24 strand S/M Fiber Optic cable	FT	\$ 3.92
Fut-074	48 strand M/M non-plenum Fiber Optic cable	FT	\$ 8.72
Fut-075	72 strand M/M non-plenum Fiber Optic cable	FT	\$ 15.38
Fut-076	144 strand M/M non-plenum Fiber Optic cable	FT	\$ 30.93
Fut-077	6 strand S/M non-plenum Fiber optic cable	FT	\$ 0.40
Fut-078	12 strand S/M non-plenum Fiber optic cable	FT	\$ 1.02
Fut-079	24 strand S/M non-plenum Fiber optic cable	FT	\$ 2.11
Fut-080	48 strand S/M non-plenum Fiber optic cable	FT	\$ 6.27
Fut-081	72 strand S/M non-plenum Fiber optic cable	FT	\$ 8.26
Fut-082	144 strand S/M non-plenum Fiber optic cable	FT	\$ 19.92
Fut-083	6 strand M/M plenum Fiber optic cable	FT	\$ 1.02
Fut-084	12 strand M/M plenum Fiber optic cable	FT	\$ 1.85



Fut-085	24 strand M/M plenum Fiber optic cable	FT	\$ 4.52
Fut-086	48 strand M/M plenum Fiber optic cable	FT	\$ 10.95
Fut-087	72 strand M/M plenum Fiber optic cable	FT	\$ 19.23
Fut-088	144 strand M/M plenum Fiber optic cable	FT	\$ 46.59
Fut-089	6 strand S/M plenum Fiber optic cable	FT	\$ 0.53
Fut-090	12 strand S/M plenum Fiber optic cable	FT	\$ 1.12
Fut-091	24 strand S/M plenum Fiber optic cable	FT	\$ 2.58
Fut-092	48 strand S/M plenum Fiber optic cable	FT	\$ 7.86
Fut-093	72 strand S/M plenum Fiber optic cable	FT	\$ 13.37
Fut-094	144 strand S/M plenum Fiber optic cable	FT	\$ 29.38
Fut-095	Gel-filled 48 strand M/M Fiber Optic cable	FT	\$ 7.60
Fut-096	Gel-filled 72 strand M/M Fiber Optic cable	FT	\$ 10.01
Fut-097	Gel-filled 144 strand M/M Fiber Optic cable	FT	\$ 28.51
Fut-098	6 strand S/M gel-filled Fiber optic cable	FT	\$ 0.41
Fut-099	12 strand S/M gel-filled Fiber optic cable	FT	\$ 0.41
Fut-100	24 strand S/M gel-filled Fiber optic cable	FT	\$ 0.61
Fut-101	48 strand S/M gel-filled Fiber optic cable	FT	\$ 1.12
Fut-102	72 strand S/M gel-filled Fiber optic cable	FT	\$ 1.80
Fut-103	144 strand S/M gel-filled Fiber optic cable	FT	\$ 4.37
Fut-104	6 strand M/M armored Fiber optic cable	FT	\$ 2.50
Fut-105	12 strand M/M armored Fiber optic cable	FT	\$ 3.61
Fut-106	24 strand M/M armored Fiber optic cable	FT	\$ 7.20
Fut-107	48 strand M/M armored Fiber optic cable	FT	\$ 19.20
Fut-108	72 strand M/M armored Fiber optic cable	FT	\$ 30.24
Fut-109	6 strand S/M armored Fiber optic cable	FT	\$ 2.56
Fut-110	12 strand S/M armored Fiber optic cable	FT	\$ 3.20
Fut-111	24 strand S/M armored Fiber optic cable	FT	\$ 5.06
Fut-112	48 strand S/M armored Fiber optic cable	FT	\$ 14.84
Fut-113	72 strand S/M armored Fiber optic cable	FT	\$ 25.37

### MISC

ITEM NO.	DESCRIPTION	UNIT	PRICE (\$)
Fut-114	Unicam MM Connector	EA	\$ 19.59
Fut-115	Unicam SM Connector	EA	\$ 26.93
Fut-116	MTRJ Unicam Connector	EA	\$ 19.59
Fut-117	MM Coupler Panel	EA	\$ 48.97
Fut-118	SM Coupler Panel	EA	\$ 59.25
Fut-119	2 X 2 Cable Tray	EA	\$ 48.97

Fut-120	4 X 4 Cable Tray	EA	\$	97.93
Fut-130	Large Capacity Cable Tray	EA	\$	195.87
Fut-131	Tray Divider Wall	EA	\$	48.97
Fut-132	Misc Tray Hardware	KT	\$	53.86
Fut-133	Cat 5e Patch Cord 3'	EA	\$	1.62
Fut-134	Cat 5e Patch Cord 5'	EA	\$	1.96
Fut-135	Cat 5e Patch Cord 10'	EA	\$	3.24
Fut-136	Cat 5e Patch Cord 15'	EA	\$	4.90
Fut-137	Cat 5e Patch Cord 20'	EA	\$	5.95
Fut-138	Cat 5e Patch Cord 25'	EA	\$	6.51
Fut-139	Cat 6 Patch Cord 25'	EA	\$	11.75
Fut-140	1 meter Fiber Jumper Multimode	EA	\$	25.46
Fut-141	3 meter Fiber Jumper Multimode	EA	\$	29.38
Fut-142	9 meter Fiber Jumper Multimode	EA	\$	51.91
Fut-143	1 meter Fiber Jumper Singlemode	EA	\$	42.11
Fut-144	3 meter Fiber Jumper Singlemode	EA	\$	46.03
Fut-145	9 meter Fiber Jumper Singlemode	EA	\$	77.37
Fut-146	Outside gel-filled 400 pair	FT	\$	6.40
Fut-147	Outside gel-filled 900 pair	FT	\$	14.64
Fut-148	Category 3 25 pair plenum	FT	\$	0.75
Fut-149	Category 3 50 pair plenum	FT	\$	1.74
Fut-150	Category 3 100 pair plenum	FT	\$	3.18
FUT-151	Cat.6A plenum cable (per 1000 ft)	BX	\$	651.46
FUT-152	Cat.6A Jack	Each	\$	8.60
FUT-153	Cat.6A 24 Port Patch Panel	Each	\$	221.13
FUT-154	Cat.6A 48 Port Patch Panel	Each	\$	434.23
FUT-156	Cat.6A Riser Cable (per 1000 ft)	BX	\$	416.59
FUT-157	Ladder Rack 15"WX1.5HX9.96L	Each	\$	227.79
FUT-158	Ladder Rack 18"WX1.5HX9.96L	Each	\$	238.19
FUT-159	Wire Mesh Cable Tray 2"HX16"WX9.96L	Each	\$	103.17
FUT-160	Wire Mesh Cable Tray 4"HX16"WX9.96L	Each	\$	112.54
FUT-161	Installation Hardware Kit	Kit	\$	103.56
FUT-162	Cat.6A Patch Cable 3'	Each	\$	7.35
FUT-163	Cat.6A Patch Cable 5'	Each	\$	8.16
FUT-164	Cat.6A Patch Cable 10'	Each	\$	10.61

FUT-165	Cat.6A Patch Cable 15'	Each	\$ 10.57
FUT-166	Cat.6A Patch Cable 20'	Each	\$ 12.98
FUT-167	Cat.6A Patch Cable 25'	Each	\$ 14.61
FUT-168	Communication cabinet Base Unit 72" Cabinet w/19" mounting rails)	Each	\$ 1,713.85
FUT-169	Communication cabinet Caster Set	Each	\$ 112.22
FUT-170	Communication cabinet 19" Rack Mounting Shelf	Each	\$ 204.03
FUT-171	72" Communication Cabinet Plexiglass Door w/Lock	Each	\$ 765.11
FUT-174	Communication Cabinet 16 POS Power strip 12" cord	Each	\$ 112.22
FUT-175	CM04, Cable management – interbay	Each	\$ 65.29
FUT-176	Half-height locking free standing Communication cabinet	Each	\$ 1,713.85
FUT-177	Rack Relay, 84"H x 19"W Double Sided Aluminium	Each	\$ 424.38
FUT-178	Mighty Moe type Rack	Each	\$ 561.08
FUT-185	3/8-16 Fully Threaded Rod, 6ft Lgth	Each	\$ 15.29
FUT-186	1 1/4" x 2" x 12" Grounding Busbar	Each	\$ 57.03
FUT-194	Fluke Cat 6 Tester - Fluke DTX Digital Cable Analyzers and Certification Testers	Each	\$ 18,362.72
FUT-195	UPS up to 6000 VA	Each	\$ 4,494.79
FUT-196	UPS up to 3000 VA	Each	\$ 1,631.22
FUT-197	UPS up to 2000 VA	Each	\$ 1,412.91
FUT-198	UPS up to 1500 VA	Each	\$ 1,198.68
FUT-199	UPS up to 1000 VA	Each	\$ 1,004.85
FUT-200	Horizontal Cable Manager, 2U Single Side with Cover	Each	\$ 84.67
FUT-201	Vertical Cable Mgmt Channel (4" x 6"x 7")	Each	\$ 136.19
FUT-202	Horizontal wire management 19"	Each	\$ 61.16
FUT-203	Velcro Ties (Roll of 100)	Each	\$ 81.10
FUT-204	Cable Ties (Black) ( 100 pk)	Each	\$ 28.97
FUT-205	J hook	Each	\$ 3.72
FUT-206	faceplate	Each	\$ 3.21
FUT-207	Cat. 6 A Plenum cable	Each	\$ 0.99
FUT-208	Cat. 6 A cable PVC	Each	\$ 0.48
FUT-209	Cat. 6 A cable (SHELDDED)	Each	\$ 1.12
FUT-210	RG-6 Coax cable (per 250 FT)	Ft	\$ 40.81
FUT-211	RG-6 Coax cable Plenum Cable	Each	\$ 0.68
FUT-212	F Connectors for RG6 Quadshield snap & seal	Each	\$ 0.67
FUT-213	Slotted Ducts, wall wiring, 2"x2"x6' (gray) 6 FT SECTION	Each	\$ 4.47

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## CABLING PACKAGE SIN 33411

**Part Number:** CPL-104-1 thru CPG-120-1

**Cable Length:** See Part Number **Cable Type:** Category 5, 4 pair

**Flame Rating:** See Part Number Surface Raceways: Yes

**Customer:** GSA/COMM. See Part Number

**Project:** CAT5 Wiring Generic that complies with industry standards

ITEM NO.	DESCRIPTION	QTY	UNIT
1	Faceplate; Duplex, flush-mount, ivory	**	ea
2	Outlet Dust Cover; ivory	**	ea
3	Backbox; surface mount, single gang	1	ea
4	Mounting Bracket; flush, sheet rock	1	ea
5	Cable; Category 5, LAN, 4 pair UTP	*	ft
6	Raceway; surface mount, ivory	**	ea
7	Cover Plate; duplex, ivory	**	ea
8	Label; 9mm	**	ea
9	Raceway Elbow, 90 degree	**	ea
10	Raceway Joint	**	ea
11	Patch cord category 5	**	ea
12	J Hook	**	ea
13	Patch panel port	**	ea
14	Rack and cable management	1	ea
15	Fasteners	1	lot
16	Cover clip	1	ea
17	Drop Ceiling Connector	1	ea
18	Data Jack; 8-conductor, ivory	**	ea
19	Station cable category 5	**	ea

\*\* Quantity is dependent on part numbers (number of drops per location)

\* Cable length varies with part number.

# Installation Packages Cabling Category 5E SIN 33411

## Per Drop Cost

ITEM NO.	Flame Rt.	No. Outlets	Price
CPL-104-1	PVC/RISER	1	\$ 243.43
CPL-105-1	1Plenum	1	\$ 288.15
CPL-112-1	PVC/RISER	2	\$ 385.14
CPL-113-1	Plenum	2	\$ 474.58
CPL-120-1	PVC/RISER	3	\$ 500.27
CPL-121-1	PVC/RISER	4	\$ 614.07
CPL-125-1	Plenum	3	\$ 634.43
CPL-129-1	Plenum	1	\$ 792.96

**Note: Per drop cost include all labor and material for the following tasks.**

- 1) Install cable per EIA/TIA 568A and 569 standards.
- 2) Terminate modular jack and the patch panel.
- 3) Install raceways below ceiling.
- 4) Test link per EIA/TIA 568A TSB 67 standard.
- 5) Print test result and provide test report.
- 6) Print and install labels

# Installation Packages

## Category 6 Cabling System

### SIN 33411

#### Per Drop Cost

ITEM NO.	Flame Rt.	No. Outlets	Price
CPG-104-1	PVC/RISER	1	\$ 365.14
CPG-105-1	Plenum	1	\$ 432.22
CPG-112-1	PVC/RISER	2	\$ 577.69
CPG-113-1	Plenum	2	\$ 711.86
CPG-117-1	PVC/RISER	3	\$ 750.40
CPG-118-1	PVC/RISER	3	\$ 921.08
CPG-119-1	3Plenum	4	\$ 951.65
CPG-120-1	Plenum	4	\$ 1,189.42

**Note: Per drop cost include all labor and material for the following tasks.**

- 1) Install cable per EIA/TIA 568A and 569 standards.
- 2) Terminate modular jack and the patch panel.
- 3) Install raceways below ceiling.
- 4) Test link per EIA/TIA 568A TSB 67 standard.
- 5) Print test result and provide test report.
- 6) Print and install labels

# Installation Inside Plant SIN 33411

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
CGIO-001	Cat5 Outlet (incl outlet, 1 Jack, 1 Cat5 Cable)	EA	\$ 127.61
CGIO-002	Free Standing Rack	EA	\$ 71.46
CGIO-003	Wall Mounted Rack	EA	\$ 71.46
CGIO-004	Consolidation Point Enclosure	EA	\$ 137.82
CGIO-005	Access Underfloor Pathway-per opening	EA	\$ 127.61
CGIO-006	Fish thru Modular Furniture-per outlet	EA	\$ 127.61
CGIO-007	Communications Pole (12 foot)	EA	\$ 68.90
CGIO-008	Latching Duct, per outlet (6 foot section)	EA	\$ 22.97
CGIO-009	Cable Raceway (Flextray) (10' Foot Section)	EA	\$ 45.94
CGIO-010	EMT - 1"	FT	\$ 1.79
CGIO-011	EMT - 2"	FT	\$ 2.85
CGIO-012	EMT - 3"	FT	\$ 4.96
CGIO-013	EMT - 4"	FT	\$ 6.42
CGIO-014	Place NEMA Junction Box	BX	\$ 137.82
CGIO-015	Core Drill, 3/4" Diameter, 6" Deep, Wood	EA	\$ 29.61
CGIO-016	Core Drill, 2" Diameter, 6" Deep, Wood	EA	\$ 65.33
CGIO-017	Core Drill, 4" Diameter, 6" Deep, Wood	EA	\$ 87.80
CGIO-018	Core Drill, 1"Diameter x 8" Deep, Concrete or Block	EA	\$ 38.67
CGIO-019	Core Drill, 2"Diameter x 8" Deep, Concrete or Block	EA	\$ 83.15
CGIO-020	Core Drill, 4.5"Diameter x 8" Deep, Concrete or Block	EA	\$ 111.18
CGIO-021	Test & Certify Existing Interior CAT5 Cable (4-pair)	EA	\$ 22.97
CGIO-022	Test & Certify Existing Interior Fiber Strands	EA	\$ 45.94
CGIO-023	Place Innerduct (10 foot section)	EA	\$ 14.80
CGIO-024	Place Copper (10 foot section) (50-pair or less)	EA	\$ 14.80
CGIO-025	Place Fiber (10 foot section)	EA	\$ 14.80
CGIO-026	Terminate Fiber (Single Strand)	EA	\$ 45.94
CGIO-027	Punchdown Multi-pair Copper Cable (100-pair)	EA	\$ 296.05
CGIO-028	Install Electrical Protection	EA	\$ 91.87
CGIO-029	Install Wall Mounted Fiber Interconnect Panel	EA	\$ 45.94
CGIO-030	Install Plywood Back Board	EA	\$ 91.87
CGIO-031	Install Metal Shelf on Plywood Backboard or in Rack	EA	\$ 22.97

CGIO-032	Install Fiber Optic Patch Panel (Large)	EA	\$ 45.94
CGIO-033	Install Fiber Optic Patch Panel Components (for large patch panel)	EA	\$ 45.94
CGIO-034	Install Climate control split unit	EA	\$ 1,665.61
CGIO-035	Install Hotel/Motel types HVAC Unit	EA	\$ 1,665.61
CGIO-036	Install vents in equipment room door/wall	EA	\$ 748.98
CGIO-037	Install small rack mounted 110 volt unit	EA	\$ 299.81
CGIO-038	Install medium rack or free standing 110 volt unit	EA	\$ 349.24
CGIO-039	Install large free standing w/batteries for 1 hour backup, 220 volt unit	EA	\$ 1,561.37
CGIO-040	Furnish and install dedicated power, 120 volt, 20 amp, quad outlets, w. in line surge protection (in box) and disconnect switch.	EA	\$ 1,934.26
CGIO-041	Furnish and install dedicated power, 120 volt, 30 amp, quad outlets, w. in line surge protection (in box) and disconnect switch.	EA	\$ 1,934.26

### DOCUMENTATION

ITEM NO.	DESCRIPTION	UNIT	PRICE(\$)
CGIO-042	Red-Line As Built Site Drawings	EA	\$ 357.30
CGIO-043	Cat5 UTP TSB-67, Method A Test Results	LO	\$ 357.30
CGIO-044	Fiber Optic EIA-526-7 Test Results	LO	\$ 357.30
CGIO-045	Fiber Optic OTDR Test Results	LO	\$ 357.30
CGIO-046	Site Cabling Administrative Records	LO	\$ 357.30



## OP Items SIN 33411

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
OP-001-1	Mobilization	EA	\$ 1,559.01
OP-002-1	Open trench 36" deep X 18" wide	FT	\$ 15.59
OP-003-1	Place 4" schedule 40 PVC Material incl.	FT	\$ 4.95
OP-004-1	Place second conduit Material incl.	FT	\$ 3.39
OP-005-1	Each additional conduit Material incl.	FT	\$ 2.61
OP-006-1	Road cut	SF	\$ 12.48
OP-007-1	Directional bore (pull back one 4" conduit) Material incl.	FT	\$ 56.99
OP-008-1	Place 12'X6'X7' manhole Material incl.	EA	\$ 12,024.62
OP-009-1	Place 4'X4'X4' manhole Material incl.	EA	\$ 6,206.81
OP-010-1	Place 4'X6'X7' manhole Material incl.	EA	\$ 9,259.71
OP-011-1	Core drill 4" building entrance (masonry) 12" max.	EA	\$ 311.80
OP-012-1	Manhole 4" core drill (pre cast)	EA	\$ 233.85
OP-013-1	Hang NEMA 3 R Box 24"X24"X8' Material incl.	EA	\$ 540.66
OP-014-1	Pull fiber cable in conduit	FT	\$ 2.34
OP-015-1	Place fiber cable in open trench	FT	\$ 1.57
OP-016-1	Place copper cable in conduit	FT	\$ 1.57
OP-017-1	Copper splicing Material incl.	PR	\$ 3.11
OP-018-1	Fiber splicing (To include all material) Material incl.	EA	\$ 93.55
OP-019-1	Place 72 port LIU (include label and assy.)	EA	\$ 31.18
OP-020-1	Place 100A 24 port (include label and assy.)	EA	\$ 20.39
OP-021-1	Copper termination	PR	\$ 3.11
OP-022-1	Place 19" rack Material incl.	EA	\$ 328.82
OP-023-1	Hang cabinet	EA	\$ 193.43
OP-024-1	Hang 100 pr. Protection	EA	\$ 77.37
OP-025-1	Install 1" EMT Material incl.	FT	\$ 5.90
OP-026-1	Install 2" EMT Material incl.	FT	\$ 9.25
OP-027-1	Install 3" EMT Material incl.	FT	\$ 15.53

OP-028-1	Install 4" EMTMaterial incl.	FT	\$ 17.06
OP-029-1	Install junction box	EA	\$ 89.94
OP-030-1	Install 1" IMTMaterial incl.	FT	\$ 7.50
OP-031-1	Install 2" IMTMaterial incl.	FT	\$ 11.92
OP-032-1	Install 3" IMTMaterial incl.	FT	\$ 17.36
OP-033-1	Install 4" IMTMaterial incl.	FT	\$ 22.73
OP-034-1	Install 2" RigidMaterial incl.	FT	\$ 14.35
OP-035-1	Install 3" RigidMaterial incl.	FT	\$ 27.40
OP-036-1	Install 4" RigidMaterial incl.	FT	\$ 37.08
OP-037-1	Install 2" PVCMaterial incl.	FT	\$ 6.61
OP-038-1	Install 3" PVCMaterial incl.	FT	\$ 11.34
OP-039-1	Install 4" PVCMaterial incl.	FT	\$ 14.83
OP-040-1	Rock excavation	CF	\$ 6.23
OP-041-1	Jack and bore 12" to include casingMaterial incl.	lf	\$ 234.26
OP-042-1	Plow cable - Short Distance (up to 1000')	FT	\$ 8.75
OP-043-1	Plow Cable - Long Distance (over 1000')	FT	\$ 6.88
OP-044-1	Plow Additional Cable/Split Duct	FT	\$ 2.75
OP-045-1	Trench cable - Short Distance (Up to 1000')	FT	\$ 14.69
OP-046-1	Trench cable - Long Distance (Over 1000')	FT	\$ 11.74
OP-047-1	Place additional cable simultaneously with first cable	FT	\$ 2.75
OP-048-1	Hand digging >5 feet	CF	\$ 22.74
OP-049-1	Place cable/conduit by backhoe method	FT	\$ 17.38
OP-050-1	Install 9-way 4" PVC/PE direct buried 4" concrete encased with minimum 24" cover	FT	\$ 82.20
OP-051-1	Install 6-way 4" PVC/PE direct buried 4" concrete encased with minimum 24" cover	FT	\$ 55.00
OP-052-1	Install 4-way 4" PVC/PE direct buried 4" concrete encased with minimum 24" cover	FT	\$ 41.15
OP-053-1	Install 2-way 4" PVC/PE direct buried 4" concrete encased with minimum 24" cover	FT	\$ 28.63
OP-054-1	Install 9-way 4" PVC/PE direct buried with minimum 24" cover	FT	\$ 52.52
OP-055-1	Install 6-way 4" PVC/PE direct buried with minimum 24" cover	FT	\$ 35.22
OP-056-1	Install 4-way 4" PVC/PE direct buried with minimum 24" cover	FT	\$ 27.96

OP-057-1	Install 2-way 4" PVC/PE direct buried with minimum 24" cover	FT	\$ 22.04
OP-058-1	Install 1 - 4" PVC/PE direct buried with minimum 24" cover	FT	\$ 15.07
OP-059-1	Install 2-2" PVC/PE direct buried with minimum 24" cover	FT	\$ 17.74
OP-060-1	Install 1-2" PVC/PE direct buried with minimum 24" cover	FT	\$ 14.74
OP-061-1	Install 1-way 4" PE pipe by directional drilling method	FT	\$ 54.72
OP-062-1	Install 2-way 4" PE pipe by directional drilling method	FT	\$ 99.93
OP-063-1	Install 4-way 4" PE pipe by directional drilling method	FT	\$ 199.41
OP-064-1	Bore and place 1-4" GIP	FT	\$ 54.72
OP-065-1	Bore and place 2-4" GIP	FT	\$ 109.93
OP-066-1	Bore and place 10" casing	FT	\$ 324.80
OP-067-1	Bore and place 12" casing	FT	\$ 372.27
OP-068-1	Labor to install fiberglass handhole 4' x 4' x 4'	EA	\$ 2,748.26
OP-069-1	Labor to install fiberglass handhole 3' x 5' x 4'	EA	\$ 2,998.10
OP-070-1	Labor to install fiberglass handhole 5' x 5' x 4'	EA	\$ 3,871.73
OP-071-1	Labor to install traffic rated pre-cast concrete handhole, any size	EA	\$ 4,621.79
OP-072-1	Labor to install pre-cast concrete manhole 12' x 6' x 7'	EA	\$ 7,244.86
OP-073-1	Labor to install pre-cast concrete multi-directional manhole 12' x 6' x 7'	EA	\$ 7,244.86
OP-074-1	Labor to install pre-cast concrete multi-directional manhole 12' x 6' x 10'	EA	\$ 10,242.96
OP-075-1	Install manhole racking	EA	\$ 436.28
OP-076-1	Manhole Setup	EA	\$ 624.33
OP-077-1	Install splice closure (includes cable prep)	EA	\$ 543.74
OP-078-1	Fusion splice 1 fiber (SM or MM includes cable prep)	EA	\$ 58.03
OP-079-1	SET UP AND BREAKOUT OSP FIBER CABLE (24str)	EA	\$ 219.22
OP-080-1	STRAIGHT SPLICE COPPER CABLE	PR	\$ 2.17
OP-081-1	Branch Splice	PR	\$ 2.17
OP-082-1	TAG PAIRS	PR	\$ 0.95
OP-083-1	CABLE TRANSFER IN WORKING CABLE	PR	\$ 3.12
OP-084-1	SECTION TRANSFER	PR	\$ 3.43
OP-085-1	Acceptance testing for copper cable	PR	\$ 5.44

OP-086-1	OTDR test and document single strand of fiber (both ways at 1310nm and 1550nm)	EA	\$ 38.11
OP-087-1	Power Meter/Light Source test and document single strand of fiber (both ways at 1310nm and 1550nm)	EA	\$ 22.49
OP-088-1	Place inner duct/Maxcel in existing 4" duct up to 4 inner ducts	FT	\$ 4.00
OP-089-1	Place Cable in conduit/innerduct	FT	\$ 2.75
OP-090-1	Place 1 to 300 pair in duct/conduit	FT	\$ 6.64
OP-091-1	Place 400 to 900 pair in duct/conduit	FT	\$ 8.25
OP-092-1	Place 1200 to 1800 pair in duct/conduit	FT	\$ 10.23
OP-093-1	Place 2100 to 2700 pair in duct/conduit	FT	\$ 12.63
OP-094-1	Place 3000 to 3600 pair in duct/conduit	FT	\$ 14.99
OP-095-1	Place Fiber in duct/conduit (all sizes)	FT	\$ 2.13
OP-096-1	Pneumatic rodding conduit place pull rope/tape	FT	\$ 2.75
OP-097-1	Rod conduit with existing cable	FT	\$ 3.14
OP-098-1	Core drill manhole	EA	\$ 562.01
OP-099-1	Core drill building entrance	EA	\$ 436.28
OP-100-1	Cut and restore concrete (includes material)	CY	\$ 1,719.34
OP-101-1	Cut and restore asphalt 2" increments (includes material)	SF	\$ 34.38
OP-102-1	Install up to 24" x 24" x 12" Junction BoxMaterial incl.	EA	\$ 311.63
OP-103-1	Install 8' copper clad ground rod	EA	\$ 51.58
OP-104-1	Place Pedestal - Any Size - stake or pole mounted	EA	\$ 178.38
OP-105-1	Cut Rock up to 12" deep x 6" wide	FT	\$ 24.72
OP-106-1	Cut Rock Additional 6" width or 12" depth	FT	\$ 24.72
OP-107-1	Remove Cable from existing duct	FT	\$ 2.75
OP-108-1	Place Sod 24"x12" area	EA	\$ 61.25
OP-109-1	Install raceway for in room fiber runs	FT	\$ 8.06
OP-110-1	Pull building fiber from building POE to closet LIU (per ft)	FT	\$ 3.51
OP-111-1	Place up to 35' pole	EA	\$ 56.95
OP-112-1	Place over 35' pole	EA	\$ 939.19
OP-113-1	Place up to 35' push brace	EA	\$ 592.09
OP-114-1	Place over 35' push brace	EA	\$ 939.19
OP-115-1	Additional charge for setting pole in rock	EA	\$ 524.40
OP-116-1	Remove up to 35' pole	EA	\$ 221.36
OP-117-1	Remove over 35' pole	EA	\$ 274.02

OP-118-1	Remove up to 35' push pole	EA	\$ 221.36
OP-119-1	Remove over 35' push pole	EA	\$ 274.02
OP-120-1	TRANSFER ATTACHMENTS	EA	\$ 146.15
OP-121-1	PLACE ANCHOR AND GUY (all types/sizes)	EA	\$ 349.24
OP-122-1	PLACE ANCHOR AND GUY IN ROCK OR ADVERSE SOIL (all types/sizes)	EA	\$ 524.40
OP-123-1	REMOVE ANCHOR AND GUY	EA	\$ 118.21
OP-124-1	PLACE STRAND/MESSENGER - ANY SIZE	FT	\$ 1.28
OP-125-1	REMOVE STRAND/MESSENGER - ANY SIZE	FT	\$ 0.58
OP-126-1	Install 1 to 300 pair, lash to messenger	FT	\$ 2.78
OP-127-1	Install 400 to 900 pair, lash to messenger	FT	\$ 3.18
OP-128-1	Install 1200 to 1800 pair, lash to messenger	FT	\$ 5.84
OP-129-1	Install 2100 to 2700 pair, lash to messenger	FT	\$ 9.39
OP-130-1	Install 3000 to 3600 pair, lash to messenger	FT	\$ 10.74
OP-131-1	Install any fiber optic cable, lash to messenger	FT	\$ 2.45
OP-132-1	Labor to overlash 1 to 300 pair cable	FT	\$ 3.03
OP-133-1	Labor to overlash 400 to 900 pair cable	FT	\$ 3.54
OP-134-1	Labor to overlash 1200 to 1800 pair cable	FT	\$ 6.64
OP-135-1	Labor to overlash 2100 to 2700 pair cable	FT	\$ 9.68
OP-136-1	Labor to overlash 3000 to 3600 pair cable	FT	\$ 11.50
OP-137-1	Labor to overlash any fiber optic cable	FT	\$ 2.75
OP-138-1	Remove up to 3600 pair ariel copper cable	FT	\$ 2.75
OP-139-1	Remove any fiber optic cable	FT	\$ 1.30
OP-140-1	PLACE HOUSE/BLOCK CABLE	FT	\$ 93.49
OP-141-1	Place Innerduct (10 foot section)	EA	\$ 25.52
OP-142-1	Place Fiber (10 foot section)	EA	\$ 22.25
OP-143-1	Terminate Fiber (Single Strand)	EA	\$ 48.36
OP-144-1	Rod/Prove/Install Pull Tape	FT	\$ 2.13
OP-145-1	Manhole Pumping, Average Water Level	EA	\$ 204.17
OP-146-1	Manhole Pumping, High Water Level	EA	\$ 306.26
OP-147-1	Manhole Gas Certification	EA	\$ 255.22

OP-148-1	Conduit Repair (4-foot section)	EA	\$ 357.30
OP-149-1	Pull Copper Cable in Conduit (100 Pr)	FT	\$ 2.22
OP-150-1	Fiber Splicing, includes all materials	EA	\$ 91.87
OP-151-1	Copper Splicing, includes all materials	PR	\$ 2.96
OP-152-1	Test & Certify Existing Outside Fiber Strands	EA	\$ 45.94

### DOCUMENTATION

ITEM NO.	DESCRIPTION	UNIT	PRICE(\$)
OP-153-1	Red-Line As Built Site Drawings	EA	\$ 357.30
OP-154-1	Cat5 UTP TSB-67, Method A Test Results	LO	\$ 357.30
OP-155-1	Fiber Optic EIA-526-7 Test Results	LO	\$ 357.30
OP-156-1	Fiber Optic OTDR Test Results	LO	\$ 357.30
OP-157-1	Site Cabling Administrative Records	LO	\$ 357.30

## NETWORK ELECTRONICS (Material Only) SIN 33411

### ROUTERS

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
NEG-001-1	Small Office Router	EA	\$ 1,856.10
NEG-002-1	Edge Moduler Router	EA	\$ 16,704.93
NEG-003-1	Firewall Appliance	EA	\$ 28,676.80
NEG-004-1	Secured Communications Appliance	EA	\$ 15,776.89
NEG-005-1	Router	EA	\$ 21,809.22
NEG-006-1	Fiber Module, SM	EA	\$ 4,347.92
NEG-007-1	Fiber Module, MM	EA	\$ 2,501.10
NEG-008-1	SOHO Router, 10/100 Ports	EA	\$ 787.91
NEG-009-1	CSU/DSU	EA	\$ 927.13
NEG-010-1	Small Firewall Appliance	EA	\$ 13,920.78
NEG-011-1	Network Expansion Module	EA	\$ 7,345.09
NEG-012-1	Ethernet Expansion Module	EA	\$ 7,932.70
NEG-016-1	VPN Expansion Module	EA	\$ 39,027.03
NEG-020-1	Management Appliance	EA	\$ 13,178.34
NEG-022-1	MUX, BRI/PRI/T1	EA	\$ 2,598.55
NEG-023-1	VPN Bundle Router	EA	\$ 5,475.51

### SWITCHES

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
NEG-025-1	up to 24 Port Switch	EA	\$ 6,496.37
NEG-026-1	Management Module for Core Switch	EA	\$ 9,275.88
NEG-027-1	up to 48 Port Fiber Optic MTRF Module	EA	\$ 12,976.32
NEG-028-1	up to 24 Port Switch, GBIC Ports	EA	\$ 9,275.88
NEG-029-1	up to 48 Port Switch	EA	\$ 1,572.81
NEG-030-1	up to 48 Port Switch	EA	\$ 6,491.73
NEG-031-1	up to 24 Port Switch	EA	\$ 4,635.62
NEG-032-1	Closet Switch, Modular	EA	\$ 11,577.45
NEG-033-1	Power Over Ethernet (POE) Module	EA	\$ 587.61
NEG-034-1	up to 24 Port Switch	EA	\$ 1,109.02
NEG-035-1	Wireless LAN Module	EA	\$ 22,524.94

NEG-036-1	up to 9 Slot Modular Switch	EA	\$ 58,462.63
NEG-037-1	up to 6 Slot Modular Switch	EA	\$ 27,841.56
NEG-038-1	up to 48 Port Switch, 4 GBIC Ports	EA	\$ 18,556.40
NEG-039-1	up to 12 Port Multi-Layer Switch	EA	\$ 7,424.42
NEG-040-1	up to 24 Port POE Switch	EA	\$ 2,227.32
NEG-041-1	Firewall Module	EA	\$ 27,836.91
NEG-042-1	Closet Switch, Chassis	EA	\$ 7,424.42
NEG-043-1	48 Port Module	EA	\$ 15,665.52
NEG-044-1	Power Supply Module	EA	\$ 4,171.59
NEG-045-1	Single Mode Module	EA	\$ 3,243.54
NEG-046-1	Rack Server	EA	\$ 4,128.90
NEG-049-1	Wireless PC Card	EA	\$ 195.87
NEG-050-1	54 Megabit PC Card	EA	\$ 107.73
NEG-051-1	11 Megabit PC Card	EA	\$ 68.55
NEG-052-1	Wireless Broadband Router	EA	\$ 143.17
NEG-056-1	Access Point Large Area	EA	\$ 923.41
NEG-057-1	Access Point Large Area	EA	\$ 1,573.04
NEG-058-1	Directional Antenna	EA	\$ 1,294.64
NEG-059-1	Omni Directional Antenna	EA	\$ 915.99
NEG-060-1	Wireless LAN Bridge	EA	\$ 881.41
NEG-061-1	Wireless Site Survey 1 Day	EA	\$ 2,315.49
NEG-062-1	Wireless Site Survey - Additional per day price	EA	\$ 1,480.24
NEG-063-1	801.11a,b,g Access Point	EA	\$ 835.24
NEG-064-1	User License	EA	\$ 464.02
NEG-068-1	Wireless Bridge	EA	\$ 9,058.94

**Note:** Interface module sold separately.

In some products memory options, network processing engine and software sold separately. Installation not included.



## VIDEO TELECONFERENCING SIN 33411

### WHITE BOARD for Data Conferencing (engineering, installation, and material)

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
VTG-001-1	Interactive White Board	EA	\$ 8,324.43
VTG-002-1	LCD Projector	EA	\$ 9,303.78

### Point-to-Point VTC System (engineering, installation, and material) Maintenance pricing is not included in the price unless otherwise noted. Maintenance is required to be purchased on all video VTC units and Codecs

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
VTG-005-1	Dual Monitor Cart Solution with Codec	EA	\$ 36,725.44
VTG-007-1	Document Camera	EA	\$ 4,602.92
VTG-008-1	Display Cart for VTC Units with Codec shelf	EA	\$ 5,386.40
VTG-011-1	CSU/DSU	EA	\$ 4,930.02
VTG-012-1	Network/video device deployment	EA	\$ 6,031.79
VTG-013-1	Video Cabinet with mounting rails and shelves	EA	\$ 5,288.46
VTG-014-1	ISDN/BRI Interface	EA	\$ 14,004.63
VTG-019-1	Up to 65" Display with installation kit	EA	\$ 11,752.14
VTG-020-1	Up to 37" Display with installation kit	EA	\$ 2,546.30
VTG-021-1	Up to 55" Display with installation kit	EA	\$ 10,772.80
VTG-022-1	Video Cart for CODEC and Monitor	EA	\$ 3,231.84
VTG-023-1	Extra Camera for VTC Rooms with Power Supply	EA	\$ 4,304.22
VTG-024-1	Professional Audio Sound System Included Speakers and Centralized Control unit	EA	\$ 4,896.73
VTG-025-1	IP Only Video Codec and Monitor/Executive Solution	EA	\$ 8,613.34
VTG-028-1	Blu Ray Player	EA	\$ 293.80
VTG-029-1	Small-Capacity Video Infrastructure	EA	\$ 47,987.91
VTG-030-1	Video Gateway	EA	\$ 39,173.80
VTG-031-1	Large-Capacity Video Infrastructure	EA	\$ 77,368.26
VTG-035-1	Video/Room Scheduling Software Package	EA	\$ 9,303.78
VTG-036-1	Small Room Codec	EA	\$ 19,577.11
VTG-038-1	Network Gatekeeper	EA	\$ 10,763.00
VTG-039-1	Large Capacity Video Codec	EA	\$ 20,556.45
VTG-043-1	Cable Raceway for perimeter and under table wiring of AV control(s)	EA	\$ 6,982.73
VTG-044-1	CSU/DSU Chasis based solution with multiple card interfaces	EA	\$ 10,674.86
VTG-045-1	Personalized Desktop Video Package	EA	\$ 10,968.66
VTG-046-1	Collaboration Package	EA	\$ 3,427.71

VTG-047-1	Continuous Presence Deluxe	EA	\$ 19,577.11
VTG-048-1	Cables, connectors, etc.	LO	\$ 2,448.36
VTG-053-1	Up to 5 VTC rooms on one campus, includes wiring, VTC equipment, cables, peripherals, monitors	EA	\$ 293,568.48
VTG-054-1	Up to 10 VTC rooms on one campus, includes wiring, VTC equipment, cables, peripherals, monitors	EA	\$ 408,171.45
VTG-056-1	Desktop Video System	EA	\$ 4,407.05
VTG-057-1	12" LCD Remote Control Display with Cable	EA	\$ 9,298.88
VTG-058-1	Set top Codec, capable of integration into existing screen, projector, or monitor solutions	EA	\$ 7,340.19
VTG-059-1	Individual Video Monitor and Camera	EA	\$ 10,278.23
VTG-060-1	Acoustical Wall Panels and mounting hardware	LO	\$ 9,695.52
VTG-062-1	Network Termination Equipment (4)	EA	\$ 646.37
VTG-063-1	Network Termination Equipment (3)	EA	\$ 313.39
VTG-070-1	Customized Video Credenza	EA	\$ 10,771.82
VTG-071-1	Conference Room Lighting control	LO	\$ 13,709.85
VTG-076-1	Portable, monitor, Codec, fully enclosed in hardened case emergency video teleconferencing system	EA	\$ 23,499.39
VTG-081-1	Dual Monitor Video Teleconferencing System	EA	\$ 54,671.94
VTG-091-1	Dual Screen mobile video system	EA	\$ 30,359.70

### VIDEO PROFESSIONAL SERVICES

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
VTG-097-1	Staging Fee for 1 Video Conference Unit (CONUS), Staging Includes Product Testing, Documentation, Freight to Site	EA	\$ 2,448.36
VTG-098-1	Staging Fee for 1 Video Conference Unit (OCONUS) Staging Includes Product Testing, Documentation, Freight to Site	EA	\$ 5,876.07
VTG-099-1	Staging Fee for 50-100 Video Conference Units (CONUS) Staging Includes Product Testing, Documentation, Freight to Site	EA	\$ 14,690.18
VTG-100-1	Video Survey for 1 site up to 20 endpoints (CONUS), includes survey of current endpoint, network, and product recommendations	EA	\$ 12,241.81
VTG-101-1	Programming of Extron/Crestron Remote for one conference room only	EA	\$ 14,102.57
VTG-103-1	Training 1 Site by Video Engineer (Conus)	EA	\$ 10,180.29
VTG-104-1	Training 1 Site by video Engineer (Oconus)	EA	\$ 19,534.02
VTG-105-1	Conference Room Refurbishing	EA	\$ 29,674.16
VTG-106-1	Video Assessment with Subject Matter Expert	EA	\$ 43,722.86
VTG-107-1	Video and Audio Visual Consulting Engagement	EA	\$ 42,106.94
VTG-108-1	Mobile VTC SolutionVideo Professional Services	EA	\$ 32,313.49
VTG-109-1	Display with wall mount or floor mount apparatus	EA	\$ 17,623.31
VTG-114-1	Portable VTC System	EA	\$ 24,483.63
VTG-115-1	Installation of VTC systems (CONUS)	EA	\$ 2,448.36
VTG-116-1	Installation of VTC systems (OCONUS)	EA	\$ 13,033.37

VTG-117-1	Installation of VTC systems includes VTC System, Separate Monitors, Ceiling Microphones, Cabling, Training (CONUS)	EA	\$ 14,440.10
VTG-118-1	Installation and Training of scheduling software on the network, includes server configuration.	EA	\$ 11,743.87
VTG-119-1	Installation of Crestron/AMX, remote AV controller for a single room, includes programming(CONUS)	EA	\$ 13,033.37
VTG-120-1	Installation and Training of scheduling software on the network, includes server(OCONUS)	EA	\$ 14,440.10
VTG-121-1	Installation of network peripherals to support ISDN to IP or IP video calls, Senior Level Systems Engineer on site(CONUS)	EA	\$ 13,271.11
VTG-122-1	Installation of network peripherals to support ISDN to IP or IP video calls, Senior Level Systems Engineer on site (OCONUS)	EA	\$ 14,560.90
VTG-123-1	Installation of Crestron/AMX, remote AV controller for a single room, includes programming(OCONUS)	EA	\$ 15,967.24
VTG-124-1	Installation of remote camera	EA	\$ 2,722.58
VTG-125-1	Installation of recessed network plugs in wall or floor	EA	\$ 4,113.25
VTG-126-1	Installation of one VTC endpoint	EA	\$ 3,427.71
VTG-127-1	Installation of one VTC endpoint (OCONUS)	EA	\$ 7,834.76
VTG-128-1	Video Infrastructure Configuration and Installation	EA	\$ 11,747.24
VTG-129-1	Staging of VTC Equipment (11-20 endpoints CONUS)	EA	\$ 10,062.77
VTG-130-1	Staging of VTC Equipment (1-10 endpoints CONUS)	EA	\$ 9,009.97
VTG-131-1	Staging of VTC Equipment (11-20 endpoints OCONUS)	EA	\$ 11,580.76
VTG-132-1	Staging of VTC Equipment (1-10 endpoints OCONUS)	EA	\$ 10,468.22
VTG-133-1	One Day of Troubleshooting On Site	EA	\$ 2,252.49
VTG-134-1	Design Engineering for VTC/AV systems single room (CONUS)	EA	\$ 3,452.19
VTG-135-1	Design Engineering for VTC/AV systems single room (OCONUS)	EA	\$ 4,788.02
VTG-165-1	System Commissioning for 1 VTC Systems Conus	EA	\$ 3,417.91
VTG-167-1	System Commissioning for 1 VTC Systems Oconus	EA	\$ 6,413.73
VTG-174-1	Design Build Consulting Engagement for Video, Audio, and AV, per conference room	EA	\$ 26,344.38
VTG-180-1	Large Interactive Whiteboard	EA	\$ 70,215.78
VTG-180-10	Technology Conference Suite	EA	\$ 19,691.98
VTG-180-2	DLP Three Chip-Projector Kit	EA	\$ 37,925.97
VTG-180-3	Up to 110" Display/Video Wall Kit	EA	\$ 44,886.65
VTG-180-4	Video Wall Bundle	EA	\$ 327,015.45
VTG-180-5	Speakers Wall Mountable or Ceiling Mountable (Pair)	EA	\$ 234.80
VTG-180-6	Audio Amp	EA	\$ 800.55
VTG-180-7	Video Switch	EA	\$ 48,047.93

VTG-180-8	PC Connection with Wall Plate	EA	\$ 819.93
VTG-180-9	Projection Screen and Mounting Hardware Kit	EA	\$ 18,634.76
VTG-181-1	DLP Single Chip-Projector Kit	EA	\$ 16,771.28
VTG-181-10	PC for Use with Network and Presentations	EA	\$ 2,448.36
VTG-181-2	Up to 82" Display	EA	\$ 28,564.23
VTG-181-3	HD Camera	EA	\$ 4,589.74
VTG-181-4	Single Monitor Video Cart with Codec	EA	\$ 16,949.06
VTG-181-5	Microphone Table with cable and mounting kit	EA	\$ 229.21
VTG-181-59	40g Optical Interface Card	EA	\$ 130,579.35
VTG-181-6	Audio mixer	EA	\$ 1,899.63
VTG-181-7	Table Box for PC Connection Includes Connectors	EA	\$ 3,298.35
VTG-181-8	Rackmount Power Conditioners	EA	\$ 680.64
VTG-181-9	Projector Kit (pole, mounting bracket)	EA	\$ 360.65

### MAINTENANCE OF VTC SYSTEMS (CONUS)

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
VTG-136-1	Standard Maintenance 15% of total list price of all VTC equipment and peripherals	Lot	15% of Total List Price

## *Standard Maintenance Plan*

The Standard Maintenance Plan is designed for customers who install and maintain their own networks. It is the ideal choice for customers who need responsive technical assistance. This plan provides the following services:

- ☐ Telephone support provided by Futron Monday through Friday, 8 AM to 8 PM Customer's local time
  - ☐ Hardware replacement of critical components (major hardware) within 3-business days.
  - ☐ Software updates per manufacturer licensing agreements
  - ☐ Maintenance for each installation begins when the PM receives the completed Acceptance form for the particular installation.
- The following conditions apply:

- ☐ Replacement part determinations must be made by the NSC prior to 4:00 PM Eastern Time. Any determination made after 4:00 PM ET will be considered as having occurred on the next business day.
- ☐ Software updates, per manufacturer's stated written policy and subject to manufacturer's licensing agreement. (In some instances, customers may be required to obtain a separate software maintenance contract.)

The following services are not considered part of the maintenance plan. These services can be separately ordered if needed:

- ☐ Remote diagnostic support
- ☐ Remote installation support
- ☐ Annual Preventive Maintenance Visit
- ☐ Call history tracking and annual reporting
- ☐ Direct interface support to local or long distance carrier and/or network provider

☐ Equipment re-locations , additions , or reconfigurations (See NOTES below.)

\* NOTES

1. The Standard Maintenance Plan provides a discount for equipment relocations , additions , and reconfigurations .
2. Requests for equipment re-locations , additions , or reconfigurations must be provided to YTC for review at least 10 business days prior to the requested work date.

## ENHANCED MAINTENANCE OF VTC SYSTEMS (CONUS)

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
VTG-137-1	Enhanced Maintenance 23% of total list price of all VTC equipment and peripherals	Lot	<b>23% of Total List Price</b>

### ***Enhanced Maintenance Plan***

The Enhanced Maintenance Plan provides comprehensive maintenance and support for customers who require a high level of responsiveness and on-site support. It is the ideal choice for customers running large enterprise communications networks. The Enhanced Maintenance Plan provides the following services:

- ☐ Telephone support provided by Futron Monday through Friday, 8 AM to 8 PM Customer's local time; guaranteed 2-hour response.
- ☐ Next-business-day onsite engineer if Futron and Customer agree this is necessary.
- ☐ Hardware replacement of critical components (major hardware) within 2-business days.
  - ☐ 24-hour/7-day access to the Futron video test facilities
  - ☐ 2 hours of remote user-orientation training per year
  - ☐ Software updates per manufacturer licensing agreements
  - ☐ Remote diagnostic support

- ☐ Maintenance for each installation begins when the PM receives the completed Acceptance form for the particular installation.

The following conditions apply:

- ☐ On-site dispatch and parts replacement determinations must be made by Futron prior to 4:00 PM Eastern Time. Any determination made after 4:00 PM ET will be considered as having occurred on the next business day.
- ☐ Software updates are provided per manufacturer's stated written policy and are subject to manufacturer's licensing agreement. In some instances, customers may be required to obtain a separate software maintenance contract.

The following services are not considered part of the maintenance plan. These services can be separately ordered if needed:

- ☐ Remote installation support
- ☐ Annual Preventive Maintenance Visit
- ☐ Call history tracking and annual reporting
- ☐ Direct interface support to local or long distance carrier and/or network provider
- ☐ Equipment re-locations , additions , or reconfigurations (See NOTES below.)

NOTES

1. The Enhanced Maintenance Plan provides a discount for equipment re- locations, additions. and reconfigurations.

2. Requests for equipment re-locations, additions, or reconfigurations must be provided to YTC for review at least 5 business days prior to the requested work date.

## PREMIER MAINTENANCE OF VTC SYSTEMS (CONUS)

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
VTG-138-1	Premier Maintenance 40% of total list price of all VTC equipment and peripherals	Lot	40% of Total List Price
<p><b>Premier Maintenance Plan</b></p> <p>The Premier Maintenance Plan provides comprehensive maintenance and support for customers who require the highest level of responsiveness and on-site support. It is the ideal choice for customers who are running mission-critical communications networks. The Premier Maintenance Plan includes the following:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 24-hour, 7 days-a-week telephone support; provided by Futron; guaranteed 1-hour response.</li> <li><input type="checkbox"/> Next-business-day onsite engineer if Futron and Customer agree this is necessary.</li> <li><input type="checkbox"/> Hardware replacement of critical components (major hardware) within 1-business day. <ul style="list-style-type: none"> <li><input type="checkbox"/> 24-hour/7-day access to the Futron video test facilities</li> <li><input type="checkbox"/> 4 hours of remote user-orientation training per year</li> <li><input type="checkbox"/> Software updates per manufacturer licensing agreements</li> <li><input type="checkbox"/> Remote diagnostic support</li> </ul> </li> <li><input type="checkbox"/> Maintenance for each installation begins when the PM receives the completed Acceptance form for the particular installation.</li> </ul> <p>The following conditions apply:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> On-site dispatch and parts replacement determinations must be made by Futron prior to 4:00 PM Eastern Time. Any determination made after 4:00 PM ET will be considered as having occurred on the next business day.</li> <li><input type="checkbox"/> Software updates are provided per manufacturer's stated written policy and are subject to manufacturer's licensing agreement. In some instances, customers may be required to obtain a separate software maintenance contract.</li> </ul> <p>The following services are not considered part of the maintenance plan. These services can be separately ordered if needed:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Remote installation support</li> <li><input type="checkbox"/> Annual Preventive Maintenance Visit</li> <li><input type="checkbox"/> Call history tracking and annual reporting</li> <li><input type="checkbox"/> Direct interface support to local or long distance carrier and/or network provider</li> <li><input type="checkbox"/> Equipment re-locations, additions, or reconfigurations (See NOTES below.)</li> </ul> <p><input checked="" type="checkbox"/> NOTES</p> <ol style="list-style-type: none"> <li>1. The Premier Maintenance Plan provides a discount for equipment re-locations, additions, and reconfigurations.</li> <li>2. Requests for equipment re-locations, additions, or reconfigurations must be provided to Futron review at least 3 business days prior to the requested work date.</li> </ol>			



## PBX and VOICE over IP Systems SIN 33411

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
PBX-001-1	<b>Key System</b> - Small Voice System (includes Voice Mail-priced per 10 users)	EA	\$ 38,422.29
PBX-004-1	<b>Maintenance</b> - 8X5 Phone Support, NBD Parts and Software Replacement (OCONUS)	EA	\$ 13.22
PBX-005-1	<b>Medium PBX System</b> - Medium Voice System (includes Voice Mail-priced per 50 users)	EA	\$ 116,483.20
PBX-006-1	<b>Large PBX System</b> - Large Voice System (includes Voice Mail- priced per 100 users)	EA	\$ 746,174.18
PBX-007-1	<b>Call Accounting System</b> - Call accounting system per 10 users	EA	\$ 24,755.67
PBX-008-1	<b>Voicemail System</b> - Collaboration/Unified Communications system per 20 users PBX and Voice over IP Systems	EA	\$ 141,779.24
PBX-009-1	<b>Call Center System</b> - Virtualization/Communications System Package	EA	\$ 473,350.12
PBX-010-1	<b>VoIP System 300</b> - IP Client Licenses, 200 - 16 Button Display IP Phone Sets, 100 - Softphone Licenses, 8 - Analog Device Ports, 8 Port Voicemail, Full Redundancy	EA	\$ 521,063.00
PBX-011-1	<b>Staging</b> - Standard Staging for 1 to 100 user phone system (CONUS)	EA	\$ 6,610.58
PBX-012-1	<b>Staging</b> - Standard Staging per 10 user Communication system	EA	\$ 9,915.87
PBX-013-1	<b>Staging</b> - Standard Staging per 50 user Communication system	EA	\$ 11,237.98
PBX-014-1	<b>Staging</b> - Standard Staging per 100 user Communication system	EA	\$ 15,204.33
PBX-015-1	<b>Maintenance</b> - 8X5 Phone Support, NBD Parts and Software Replacement (CONUS)	EA	\$ 6.94
PBX-016-1	<b>Maintenance</b> - 24X7 Phone Support, NBD On-Site Parts and Software Replacement (CONUS)	EA	\$ 9.59
PBX-017-1	<b>Maintenance</b> - 24X7 Phone Support, NBD On-Site Parts and Software Replacement (OCONUS)	EA	\$ 20.50
PBX-018-1	<b>Maintenance</b> - Voice Recertification for Maintenance Coverage	EA	\$ 991.59
PBX-019-1	<b>Services</b> - Moves Adds and Changes (CONUS), minimum of 4 hours required	EA	\$ 178.49
PBX-020-1	<b>Services</b> - Dial Plan/Call Routing Design	EA	\$ 46.27
PBX-021-1	<b>Products</b> - Basic Phone	EA	\$ 527.52
PBX-022-1	<b>Products</b> - Standard Phone	EA	\$ 659.74
PBX-023-1	<b>Products</b> - Executive Phone	EA	\$ 859.38
PBX-024-1	<b>Products</b> - IP Phone	EA	\$ 661.06
PBX-025-1	<b>Products</b> - User Licensee for TDM/PBX users	EA	\$ 3.97

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PBX-026-1	<b>Products</b> - Phone User Manual	EA	\$ 15.21
PBX-027-1	<b>Products</b> - End User Training, minimum 100 users	EA	\$ 19.83
PBX-028-1	<b>Products</b> - Detailed Administrative Training including phone and head end products, 2 day class	EA	\$ 7,602.17



## SATELLITE COMMUNICATION SYSTEM SIN 33411

### EARTH STATION EQUIPMENT

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
SAT-001-1	3.8 Mt. Prod. Antenna, 2 Port Linear Feed	EA	\$ 13,718.46
SAT-002-1	C-Band Satellite Terminal	EA	\$ 24,188.75
SAT-003-1	Base Band Equipment	EA	\$ 6,681.97
SAT-004-1	Integration Material	LO	\$ 1,856.10
SAT-005-1	Redundant C-Band Terminal	EA	\$ 37,864.52
SAT-006-1	Redundant SDM-300A Satellite Modem	EA	\$ 6,681.97
SAT-007-1	Redundant Switch Modem	EA	\$ 12,473.02
SAT-008-1	7.3 Mt. Antenna	EA	\$ 115,913.68
SAT-009-1	C-Band Satellite Terminal	EA	\$ 78,791.60
SAT-010-1	Base Band Equipment	EA	\$ 295,070.39
SAT-011-1	2.4 Mt. C-band Marine Stabilized Antenna	EA	\$ 106,725.97
SAT-012-1	TerraSat 200 Remote	EA	\$ 10,672.60
TB-COMP-KIT	Heliastar 29 Piece Kit	EA	\$ 795.47

### INSTALLATION

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
SAT-013-1	Site survey and RFI Field Study	EA	\$ 3,340.99
SAT-014-1	Regulatory Administrative Services	EA	\$ 3,340.99

**CCTV SECURITY and MONITORING SYSTEM**  
**Installation Packages**  
**(including Labor and Materials)**  
**SIN 33411**

**EARTH STATION EQUIPMENT**

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
CCTC-001-1	<b>4 CAMERAS</b> = 1/3" B&W Cameras, Indoor/outdoor camera enclosure, temper switches. <b>2 MONITORS</b> = rack mount 15" B&W monitor <b>VCR MUX</b> = Rack mount Time-lapse VCR, 16 Channel Duplex Multiplexer <b>NOTE: Includes labor and material</b>	EA	\$ 29,305.92
CCTC-002-1	<b>4 CAMERAS</b> = 1/3" color cameras, 3.5mm lens, indoor/outdoor camera enclosure, temper switches. <b>2 MONITORS</b> = rack mount 15" B&W monitor <b>VCR MUX</b> = Rack mount Time-lapse VCR, 16 Channel Duplex Multiplexer <b>NOTE: Includes labor and material</b>	EA	\$ 32,066.69
CCTC-003-1	<b>4 CAMERAS</b> = P/T 1/3" - 2.6mm - 12mm WA color cameras & lens, indoor/outdoor camera enclosure, temper switches, outdoor dome and other mounting hardware. <b>2 MONITORS</b> = rack mount 15" Color monitor <b>VCR MUX</b> = Rack mount Time-lapse VCR, desk top control key pad, 16 Channel Duplex Multiplexer <b>NOTE: Includes labor and material</b>	EA	\$ 67,254.16
CCTC-004-1	<b>4 CAMERAS</b> = P/T 1/3" B&W cameras, 3.5mm lens, (16) 1/3" B&W Cameras indoor/outdoor camera enclosure, temper switches. <b>2 MONITORS</b> = rack mount 15" B&W monitor, 1000 lines resolution <b>VCR MUX</b> = Rack mount Time-lapse VCR, desk top control key pad, 16 Channel Duplex Multiplexer, Line Controller, Camera and Monitor Controller <b>NOTE: Includes labor and material</b>	EA	\$ 119,822.51

## METROPOLITAN AREA NETWORK SIN 811212

### INTERNET and DATA SERVICES

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
FUT-MAN-01	1 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-02	5 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-03	10 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-04	15 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-05	20 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-06	25 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-07	30 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-08	35 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-09	40 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-10	45 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-11	50 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-12	75 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-13	80 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-14	90 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-15	95 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-16	100 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-17	105 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-18	110 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-19	115 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-20	120 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-21	125 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-22	130 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-23	135 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-24	140 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-25	150 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-26	155 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-27	160 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-28	165 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-29	175 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-30	180 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-31	185 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-32	190 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57

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FUT-MAN-33	200 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-34	225 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-35	250 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-MAN-36	275 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-37	300 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-38	325 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-39	350 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-40	375 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-41	400 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-42	425 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-43	450 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-44	475 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-45	500 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-MAN-46	525 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-47	550 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-48	575 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-49	600 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-50	625 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-51	650 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-52	675 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-53	700 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-54	725 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-55	750 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-56	775 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-57	800 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-58	825 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-59	850 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-60	875 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-61	900 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-62	925 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-63	950 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-MAN-64	1000 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91

**Futron NET Services**

Pricing applicable to and Futron “on-net” U.S. location.

“on-net” is defined as any customer location to which Futron has fiber connectivity.

ITEM NO.	DESCRIPTION	UNIT	Price (\$)
FUT-NET-01	1 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-02	5 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57

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FUT-NET-03	10 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-04	15 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-05	20 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-06	25 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-07	30 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-08	35 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-09	40 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-10	45 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-11	50 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-12	75 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-13	80 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-14	90 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-15	95 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-16	100 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-17	105 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-18	110 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-19	115 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-20	120 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-21	125 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-22	130 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-23	135 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-24	140 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-25	150 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-26	155 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-27	160 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-28	165 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-29	175 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-30	180 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-31	185 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-32	190 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-33	200 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-34	225 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-35	250 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,632.57
FUT-NET-36	275 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-37	300 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-38	325 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-39	350 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-40	375 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-41	400 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69

**FUTRON, Inc.**

FUT-NET-42	425 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-43	450 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-44	475 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-45	500 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 1,958.69
FUT-NET-46	525 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-47	550 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-48	575 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-49	600 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-50	625 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-51	650 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-52	675 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-53	700 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-54	725 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-55	750 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-56	775 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-57	800 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-58	825 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-59	850 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-60	875 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-61	900 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-62	925 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-63	950 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91
FUT-NET-64	1000 MbpsPrice shown is Non-recurring cost per site.	EA	\$ 2,611.91

**Futron NOW Feature****Service**

Futron NOW feature allows customers to scale bandwidth on an as-needed basis in increments as little as 1Mbps.

NOW is available for any of Futron products including: MAN, NAN, GAN, NET and ColoNET

**Pricing**

No non-recurring cost is applied to the NOW feature. NOW is priced at a per Mbps rate of 135% of the monthly recurring charge (MRC) of the service to which it is applied.

A \$125 minimum charge applies to each change.

## IT Services – Labor

### SIN 54151S

Item NO.	Labor Category Title	Education Level	YRS Exp.	Job Description	Price (\$)
FUL115	Agile Coach	Bachelor's degree in computer science	0-3 yrs	<p>Experience transforming initiatives to deliver lasting change within agencies that focus on delivering value for citizens. Coaches may be required to work either:</p> <ul style="list-style-type: none"> <li>• at the team level, working with teams to ensure that delivery teams within agencies are adopting agile and performing effectively</li> <li>• at the portfolio or program level, to help agencies to establish the right processes for managing a portfolio of work in an agile way</li> <li>• at the organization level, to drive strategic change across the organization and ensure that adoption of agile techniques is embedded from the most senior levels of the organization</li> <li>• or across all levels to ensure that organizations adopt a pragmatic approach to the way in which they govern delivery and continuous improvement of digital services</li> </ul> <p>Primarily responsible:</p> <ul style="list-style-type: none"> <li>• Embed an agile culture using techniques from a wide range of agile and lean methodologies and frameworks, but be methodology agnostic</li> <li>• Help to create an open and trust-based environment, which enables a focus on delivery and facilitates continuous improvement</li> <li>• Assess the culture of a team or organization and delivery processes in place to identify improvements and facilitate these improvements with the right type of support</li> <li>• Showcase relevant tools and techniques such as coaching, advising, workshops, and mentoring</li> <li>• Engage with stakeholders at all levels of the organization</li> <li>• Develop clear lines of escalation, in agreement with senior managers</li> <li>• Ensure any stakeholder can easily find out an accurate and current project or program status, without disruption to delivery</li> <li>• Work effectively with other suppliers and agencies</li> <li>• Apply best tools and techniques to: team roles, behaviors, structure and culture, agile ceremonies and practices, knowledge transfer and sharing, program management, cross team coordination, and overall governance of digital service delivery</li> <li>• Ensure key metrics and requirements that support the team and delivery are well defined and maintained</li> <li>• Equip staff with the ability to coach others</li> <li>• If organization level, executive coaching on the fundamental considerations of digital</li> </ul>	\$ 236.55



FUL003	Applications Programmer	Bachelor's degree in Computer Science	1-2 yrs	Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. Designs, codes, tests, debugs, and documents	\$ 80.73
FUL004	Applications Systems Analyst/ Programmer – <b>Senior</b>	Bachelor's degree in Computer Science	6-15 yrs	Under general direction, formulates and defines system scope and objectives. Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. Prepares detailed specifications from which programs will be written. Designs, codes, tests, debug, and document those programs. Competent to work at the highest technical level of all phases of applications systems analysis and programming activities. May be responsible for completion of a phase of a project. Regularly provides guidance and training to less-experienced analyst/programmers.	\$ 100.66
FUL111	Backend Web Developer	Bachelor's degree in computer science	0-3 yrs	Experience using modern, open source software to prototype and deploy backend web applications, including all aspects of server-side processing, data storage, and integration with frontend development. Primarily responsible for: <ul style="list-style-type: none"> <li>• Web development using open-source web programming languages (e.g., Ruby, Python) and frameworks (e.g., Django, Rails)</li> <li>• Developing and consuming web-based, RESTful APIs</li> <li>• Using and working in team environments that use agile methodologies (e.g., Scrum, Lean)</li> <li>• Authoring developer-friendly documentation (e.g., API documentation, deployment operations)</li> <li>• Test-driven development</li> <li>• Use of version control systems, specifically Git and GitHub</li> <li>• Quickly researching and learning new programming tools and techniques</li> </ul>	\$ 168.71
FUL116	Business Analyst	Bachelor's degree in computer science	0-3 yrs	Familiar with a range of digital/web services and solutions, ideally where open source and cloud technologies and agile development methodologies have been applied. An eye for detail, excellent communication skills, ability to rationalize complex information to make it understandable for others to work, and ability to interrogate reported information and challenge sources where inconsistencies are found. Primarily responsible for: <ul style="list-style-type: none"> <li>• Support agencies by analyzing propositions and assessing decision-making factors such as strategic alignment, cost/benefit, and risk</li> <li>• Work closely with the Product Manager to define a product approach to meet the specified user need</li> <li>• Define skill requirements and map internal, agency, and external (partners/specialist contractors) resources</li> <li>• Work with the owning agency to ensure they have the budget to cover the proposed approach and resource requirements during delivery and analyze what provision they have for on-going running costs</li> <li>• Analyze and map the risks of this product approach and propose mitigation solutions</li> <li>• Define how the predicted user and financial benefit can be realized, and how channel shift will be measured</li> <li>• Make a recommendation for action against the analysis done</li> </ul>	\$ 154.95



FUL005	Chief Information Security Officer	BS in Information Technology	6-9 yrs	Ensure that all information systems are functional and secure.	\$ 99.66
FUL006	Client/Server Database Manager	Bachelor's degree in Engineering	3-5 yrs	Projects long-range requirements for client/server database administration in conjunction with other managers in the information systems function as well as business function managers. Prepares activity and progress reports regarding the client/server database management section.	\$ 88.70
FUL007	Client/Server Network Architect	Bachelor's degree in Engineering	4-6 yrs	Top-Level technical expert responsible for design and development of a client/server environment. Advises on selection of technological purchases with regards to processing, data storage, data access, applications development.	\$ 128.56
FUL008	Communications Analyst - Senior	High School Diploma and Computer Training	6-9 yrs	Under general direction, assists in the planning, design, and implementation of communications networks. Responsible primarily for the assessment and optimization of network design through review and assessment of user needs. Conducts feasibility studies for large projects, develops requests for proposal, evaluates vendor products, and makes recommendations on selection. May J-54 function as lead position providing guidance and training to less-experienced analysts. Typically requires at least five years of experience in telecommunications with strong emphasis in network design, traffic engineering, equipment vendors, and carriers. Frequently reports to a Data/Voice Communications Manager or Internal Communications Systems Consultant.	\$ 86.70
FUL009	Communications Facility Engineer	Bachelor's degree in Engineering	6-9 yrs	Provides technical direction and engineering knowledge for communications systems infrastructure activities, including planning, designing, and implementing communications infrastructure requirements for buildings and systems. Ensures that adequate and appropriate planning is provided to direct building architects and planners in building communications spaces and media pathways meet industry standards.	\$ 88.70
FUL010	Communications Transmission Engineer	Bachelor of science degree in electrical engineering,	3-5 yrs	Provides technical direction and engineering knowledge for communications activities including planning, designing, installing and maintaining large communications networks. Develops, operates, and maintains voice, wireless, video, and data communications systems. Provides complex engineering or analytical tasks and activities associated with one or more technical areas within the communications function.	\$ 92.68
FUL011	Computer Operations Manager	Bachelor's Degree in Business Administration	2-5 yrs	Responsible for all activities relating to the operation of centralized data processing equipment and peripheral information systems equipment. Establishes detailed schedules for the utilization of all equipment in the computer operations section to obtain maximum utilization. Assigns personnel to various operations and directs their activities. Reviews and evaluates work and prepares performance reports. Confers with and advises subordinates on administrative policies and procedures, technical problems, priorities, and methods. Consults with personnel in other information systems sections to coordinate activities. Prepares activity and progress reports regarding the computer operations section. Frequently reports to a Director of Information Systems Operations.	\$ 105.64
FUL012	Consultant	Bachelor's Degree in Computer Science	3-9 yrs	Works with end user groups to evaluate and solve technical problems. Evaluates existing systems and/or user needs to analyze, design, recommend, and implement system changes	\$ 136.53

FUL013	Data Architect	Bachelor's Degree in Engineering	3-5 yrs	Designs and builds relational databases. Develops strategies for data acquisitions, archive recovery, and implementation of a database. Works in a data warehouse environment, which includes data design, database architecture, metadata and repository creation. Translates business needs into long-term architecture solutions. Defines, designs, and builds dimensional databases. Develops data warehousing blueprints, evaluating hardware and software platforms, and integrating systems. Evaluates reusability of current data for additional analyses. Reviews object and data models and the metadata repository to structure the data for better management and quicker access.	\$ 85.71
FUL014	Data Communication s Manager - Planning & Implementation	Bachelor's Degree in Communications	7-9 yrs	Ensures that adequate and appropriate planning is provided for remote hardware and communications facilities to develop and implement methodologies for analysis, installation, and support of distributed processing client/server systems. Provides coordination in the analysis, acquisition, and installation of hardware, software, and facilities. Manages the training and efforts of a staff engaged in system and network planning, analysis and monitoring activities. Typically requires eight to ten years of experience in software/hardware LAN and WAN network design and analysis. Frequently reports to a Telecommunications Department Director/Manager or Planning and Engineering Manager.	\$ 65.78
FUL015	Data Security Administration Manager	Bachelors of Science degree in Computer Science	8-12 yrs	Directs and implements the necessary controls and procedures to cost-effectively protect information systems assets from intentional or inadvertent modification, disclosure, or destruction. Provides guidance and direction for the physical protection of information systems assets to other functional units. Provides reports to superiors regarding effectiveness of data security and makes recommendations for the adoption of new procedures. Assigns work to subordinates, monitors performance, and conducts performance appraisals. Interviews and makes recommendations for additional staff.	\$ 98.66
FUL016	Data Security Analyst - Senior	Bachelor's Degree Information Technology	6-9 yrs	Under general direction, performs all procedures necessary to ensure the safety of information systems and to protect systems from intentional or inadvertent access or destruction. Interfaces with user community to understand their security needs and implements procedures to accommodate them. Ensures that user community understands and adheres to necessary procedures to maintain security. May require familiarity with domain structures, user authentication, and digital signatures. Conducts accurate evaluation of the level of security required. May require understanding of firewall theory and configuration. Must be able to weigh business needs against security concerns and articulate issues to management	\$ 97.67
FUL017	Data Warehousing Analyst	Bachelor's Degree Computer Science	3-5 yrs	Works in a data warehouse environment, which includes data design, database architecture, metadata and repository creation. Reviews data loaded into the data warehouse for accuracy. Responsible for the development, maintenance and support of an enterprise data warehouse system and corresponding data marts. Troubleshoots and tunes existing data warehouse applications. Conducts research into new data warehouse applications and determines viability for adoption. Assists in establishing development standards. Evaluates existing subject areas stored in the data warehouse. Incorporates existing subject areas into an enterprise model. Creates new or enhanced components of the data warehouse. Requires two years' experience in the field.	\$ 88.70

FUL018	Data Warehousing Project Manager	Bachelor's Degree in Project Management	6-9 yrs	Works in a data warehouse environment, which includes data design, database architecture, metadata and repository creation. Responsible for leading data warehouse team in development and enhancements of the data warehouse user interface. Establishes user requirements. Creates new standards and procedures related to end user and internal interface development. Works with Data Architect on technical issues and system architecture definition. Translates high-level work plans and converts to detailed assignments for team members. Monitors status of assignments and reviews work for completion and quality. Typically requires more than five years of experience.	\$ 140.52
FUL019	Data/Configuration Management Specialist	Bachelor's Degree in computer science	6-9 yrs	Provides configuration management planning. Describes provisions for configuration identification, change control, configuration status accounting, and configuration audits. Regulates the change process so that only approved and validated changes are incorporated into product documents and related software.	\$ 73.75
FUL020	Database Analyst/Programmer - Intermediate	Bachelor's Degree in computer science.	2-5 yrs	Under general supervision, designs, implements and maintains moderately complex databases. Maintains database dictionaries and integration of systems through database design. Competent to work on most phases of database administration but may require some instruction and guidance in other phases. Requires two years' experience in the field	\$ 98.66
FUL021	Database Analyst/Programmer – Senior	Bachelor's Degree in computer engineering	0-6 yrs	Under general direction, designs, implements and maintains complex database with respect to JCL, access methods, access time, device allocation, validation checks, organization, protection and security, documentation and statistical methods. Includes maintenance of database dictionaries, overall monitoring of standards and procedures and integration of systems through database design. Competent to work at the highest level of all phases of database management. Requires three years' experience in the field.	\$ 65.78
FUL022	Database Manager	Bachelor's Degree in computer science.	0-9 yrs	Responsible for all activities related to the administration of computerized databases. Assigns personnel to various projects and directs their activities. Reviews and evaluates work and prepares performance reports. Confers with and advises subordinates on administrative policies and procedures, technical problems, priorities, and methods. Consults with and advises users of various databases. Projects long-range requirements for database administration in conjunction with other managers in the information systems function as well as business function managers. Prepares activity and progress reports regarding the database management section. Typically requires five to seven years of experience.	\$ 67.77

FUL114	<b>Delivery Manager</b>	Bachelor's degree in computer science	0-3 yrs	<p>Experience setting up teams for successful delivery by removing obstacles (or blockers to progress), constantly helping the team to become more self-organizing, and enabling the work the team does rather than impose how it's done.</p> <p>Manages one or more agile projects, typically to deliver a specific product or transformation via a multi-disciplinary, high-skilled digital team. Adept at delivering complex digital projects, breaking down barriers to the team, and both planning at a higher level and getting into the detail to make things happen when needed.</p> <p>Defines project needs and feeds these into the portfolio/program process to enable resources to be appropriately allocated.</p> <p>Primarily responsible for:</p> <ul style="list-style-type: none"> <li>• Deliver projects and products using the appropriate agile project management methodology, learning &amp; iterating frequently</li> <li>• Work with the Product Manager to define the roadmap for any given product and translate this into user stories</li> <li>• Lead the collaborative, dynamic planning process -- prioritizing the work that needs to be done against the capacity and capability of the team</li> <li>• Matrix-managing a multi-disciplinary team</li> <li>• Ensure all products are built to an appropriate level of quality for the stage (alpha/beta/production)</li> <li>• Actively and openly share knowledge of best practices</li> </ul>	\$ 177.87
FUL112	Dev Ops Engineer	Bachelor's degree in computer science	0-3 yrs	<p>Experience serving as the engineer of complex technology implementations in a product-centric environment. Comfortable with bridging the gap between legacy development or operations teams and working toward a shared culture and vision. Works tirelessly to arm developers with the best tools and ensuring system uptime and performance.</p> <p>Primarily responsible for:</p> <ul style="list-style-type: none"> <li>• Deploying and configuring services using infrastructure as a service providers (e.g., Amazon Web Services, Microsoft Azure, Google Compute Engine, RackSpace/OpenStack)</li> <li>• Configuring and managing Linux-based servers to serve a dynamic website</li> <li>• Debugging cluster-based computing architectures</li> <li>• Using scripting or basic programming skills to solve problems</li> <li>• Installation and management of open source monitoring tools</li> <li>• Configuration management tools (e.g., Puppet, Chef, Ansible, Salt)</li> <li>• Architecture for continuous integration and deployment, and continuous monitoring</li> <li>• Containerization technologies (e.g., LXC, Docker, Rocket)</li> </ul>	\$ 221.88

FUL117	<b>Digital Performance Engineer</b>	Bachelor's degree in computer science	0-3 yrs	<p>Experience specifying, collecting, and presenting key performance data and analysis for a given digital service. Supports Product Managers by generating new and useful information and translating it into actions that will allow them to iteratively improve their service for users.</p> <p>Possesses analytical and problem-solving skills necessary for quickly developing recommendations based on the quantitative and qualitative evidence gathered via web analytics, financial data, and user feedback. Confident in explaining technical concepts to senior officials with limited technological background.</p> <p>And comfortable working with data, from gathering and analysis through to design and presentation.</p> <p>Primarily responsible for:</p> <ul style="list-style-type: none"> <li>• Support the Product Manager to make sure their service meets performance requirements</li> <li>• Communicate service performance against key indicators to internal and external stakeholders</li> <li>• Ensure high-quality analysis of agency transaction data</li> <li>• Support the procurement of the necessary digital platforms to support automated and realtime collection and presentation of data</li> <li>• Share examples of best practice in digital performance management across government</li> <li>• Identify delivery obstacles to improving transactional performance in agencies and working with teams to overcome those obstacles</li> </ul>	\$ 165.95
FUL023	Disaster Recovery Analyst	Bachelor's Degree in Information Technology	6-9 yrs	<p>Responsible for security and integrity of assigned electronic data, data systems, and data networks. Designs and administers programs to include policies, standards, guidelines, training programs and a viable quality assurance process for disaster recovery. Oversees and reviews the testing and implementation of software, data systems and data networks to insure that the integrity and security of all electronic data and data systems are adequately protected. Oversees and facilitates the preparation of an organization-wide business resumption plan. Responsible for insuring the business resumption plan adequately addresses the organization's requirements and established time frames. Requires five years' experience in the field.</p>	\$ 96.67
FUL024	Documentation Specialist - Senior	Bachelor's Degree in communications	3-5 yrs	<p>Under general supervision, is responsible for preparing and/or maintaining systems, programming, and operations documentation, procedures, and methods including user manuals and reference manuals. Maintains a current internal documentation library. Provides or coordinates special documentation services as required. Competent to work at the highest level of all phases of documentation. May act as project leader for large positions.</p>	\$ 80.73
FUL025	Electronic Data Interchange (EDI) Manager	Bachelor's Degree in Computer Programming	5-9 yrs	<p>Responsible for daily electronic data interchange (EDI) operations of an organization. Develops and executes strategies for Internet-based interchange capabilities. Coordinates and implements new EDI methods and systems and enhances and upgrades the existing systems. Finds EDI solutions for business operations. Establishes and maintains communications and trading partner routings, including online orders and fulfillment systems. Audits the quality of data provided, provides security and backup, and ensures system disaster recovery processes are in place. Resolves trading partner's technical problems involving EDI. Develops technical design documentation. Ensures customer/vendor agreements meet legal requirements. Responsible for internal training of EDI and related staff.</p>	\$ 85.71

FUL027	Engineering Subject Matter Specialist	Bachelor's Degree in computer engineering	0-3 yrs	Provides technical knowledge and analysis of highly specialized applications and operational environment, high-level functional systems analysis, design, integration, documentation, and implementation advice on exceptionally complex problems that necessitate high-level knowledge of the subject matter for effective implementation. Participates as needed in all phases of software development with emphasis on the planning, analysis, modeling, simulation, testing, integration, documentation and presentation phases.	\$ 173.41
FUL026	Engineering Subject Matter Specialist-Principal	Bachelor's Degree in computer engineering	6-9 yrs	Provides technical knowledge and analysis of highly specialized applications and operational environment, high-level functional systems analysis, design, integration, documentation, and implementation advice on exceptionally complex problems that necessitate high-level knowledge of the subject matter for effective implementation. Participates as needed in all phases of software development with emphasis on the planning, analysis, modeling, simulation, testing, integration, documentation and presentation phases.	\$ 358.78
FUL028	ERP Business Analyst - Intermediate	Bachelor's in computer science,	3-5 yrs	Under general supervision, serves as subject matter expert associated with content, processes, and procedures associated with enterprise applications. Applies functional knowledge to design and customize workflow systems that provide seamless integration for client/server applications. Writes functional requirements, develops test plans, and works with production issues	\$ 101.65
FUL029	ERP Business Analyst - Senior	Master's Degree in computer science.	6-9 yrs	Under general direction, serves as senior subject matter expert associated with content, processes, and procedures associated with ERP. Defines detailed requirements, analyzes business needs, and validates solutions with the client. Details requirements through product development and other functions to support the project team. Monitors other business analysts in software development methods and processes and implementation of those methods. Evaluates development projects and assists in tailoring the development process to meet the project needs.	\$ 106.64
FUL030	ERP Programmer	Bachelor's degree in computer science.	3-5 yrs	Under general supervision, works primarily in ERP client/server enterprise application. Designs and develops all aspects of data conversion. Builds application tables, panels, and reports. Codes individual modules and complex functions. Develops application tables, panels, and reports for projects. Responsible for software integration and external interface development. Troubleshoots and resolves testing issues. Responsible for technical documentation.	\$ 120.59
FUL110	<b>Front End Web Developer</b>	Bachelor's degree in computer science	0-3 yrs	Experience using modern, frontend web development tools, techniques, and methods for the creation and deployment of user-facing interfaces. Is comfortable working in an agile and lean environment to routinely deploy changes. Primarily responsible for: <ul style="list-style-type: none"> <li>• Frontend web development using modern techniques and frameworks (e.g., HTML5, CSS3, CSS frameworks like LESS and SASS, Responsive Design, Bourbon, Twitter Bootstrap)</li> <li>• JavaScript development using modern standards, including strict mode compliance, modularization techniques and tools, and frameworks and libraries (e.g., jQuery, MV* frameworks such as Backbone.js and Ember.js, D3)</li> <li>• Consuming RESTful APIs</li> <li>• Using and working in team environments that use agile methodologies (e.g., Scrum, Lean)</li> <li>• Use of version control systems, specifically Git and GitHub</li> <li>• Ensuring Section 508 Compliance</li> </ul>	\$ 143.03



				<ul style="list-style-type: none"> <li>• Quickly researching and learning new programming tools and techniques</li> <li>• Using and working with open source solutions and community</li> <li>• Creating web layouts from static images</li> <li>• Creating views and templates in full-stack frameworks like Rails, Express, or Django</li> </ul>	
FUL031	Groupware Specialist	Bachelor's degree in communications	3-5 yrs	Responsible for the implementation, maintenance, and support of organization messaging system. May work closely with first tier support staff to solve system problems. Ensures smooth integration of all groupware systems in a particular environment. Provides technical support on local groupware replication and client dial-up access issues. Prepares documentation that will assist in the maintenance of the groupware system. May serve as an internal consultant to developers, assisting them in the area of server supports, security, ID files, and other development issues that will aid the process. Requires solid working knowledge of WANs, LANs, and telecommunication concepts as they relate to the groupware system and database replication.	\$ 55.81
FUL032	Help Desk Manager	Bachelor's degree in Information Technology	3-5 yrs	Has overall responsibility for help desk operations associated with the identification, prioritization and resolution of reported problems. Ensures that all phases of help desk support are properly coordinated, monitored, logged, tracked and resolved appropriately. May maintain responsibility for development, maintenance and integrity of help desk software. Requires 3 years' experience in the field.	\$ 59.80
FUL033	Help Desk Support Services Specialist - Intermediate	High School Diploma	3-5 yrs	Under general supervision, provides second-tier support to end users for either PC, server, or mainframe applications and hardware. Handles problems that the first-tier of help desk support is unable to resolve. May interact with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem. Simulates or recreates user problems to resolve operating difficulties. Recommends systems modifications to reduce user problems. Maintains currency and high level of technical skill in field of expertise. Escalates more complex problems to senior level.	\$ 59.80
FUL034	Help Desk Support Services Specialist - Senior	Associate's degree in Computer Science	6-9 yrs	Under general direction, provides second-tier support to end users for either PC, server, or mainframe applications and hardware. Handles problems that the first-tier of help desk support is unable to resolve. May interact with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem. Simulates or recreates user problems to resolve operating difficulties. Recommends systems modifications to reduce user problems. Maintains currency and highest level of technical skill in field of expertise.	\$ 67.77
FUL118	Information Assurance Engineer	Bachelor's degree in Electrical Engineering	0-6 yrs	Oversees the storing and processing of information to make sure that it is secure. The Information Assurance Engineer identifies overall security requirements for the proper handling of data, and assist architects and system developers. Support the continuous monitoring program as necessary when Information System Continuous Monitoring (ISCM) present	\$ 129.56
FUL036	Information Assurance Network Specialist	Bachelor's degree in computer engineering,	3-5 yrs	Analyzes general information assurance-related technical problems and provides basic engineering and technical support in solving these problems. Designs, develops, engineers, and implements solutions that meet network security requirements. Performs vulnerability/risk analyses of computer systems and applications during all phases of the system development life cycle.	\$ 115.61

FUL037	Information Assurance Systems/Network Specialist	Bachelor's degree in computer engineering.	3-5 yrs	Installs, configures and maintains organization's operating systems. Analyzes and resolves problems associated with server hardware, NT, applications software. Detects, diagnoses, and reports NT related problems on both NT server and NT desktop systems. Performs a wide variety of tasks in software/hardware maintenance and operational support of NT Server systems.	\$ 84.71
FUL038	Information Center Consultant	Bachelor's degree in computer science	6-9 yrs	Under general supervision of Information Center Manager, may support unlimited end user groups. Works with users to solve problems with available technology including hardware, software and peripherals. Studies and analyzes system's needs, trains users on software and hardware, handles troubleshooting, and provides quality assurance review of user systems. Acts as project manager, typically performs time estimates, and regularly reviews status of projects. May have specialization in particular software that would be utilized in an end user environment. Keeps abreast of technological developments and may install new hardware and software for user groups. Frequently reports to an Information Center Manager.	\$ 88.70
FUL039	Information Security Business Analyst	Bachelor's degree in Information Technology	3-9 yrs	Determines enterprise information security standards. Develops and implements information security standards and procedures. Ensures that all information systems are functional and secure	\$ 84.71
FUL040	Information Services Consultant	Bachelor's degree in information Technology	6-9 yrs	Top-level technical expert supporting unlimited end user groups. Works with user groups to solve business problems with available technology including hardware, software, databases, and peripherals. Requires high level of diverse technical experience related to studying and analyzing systems needs, systems development, systems process analysis, design, and re-engineering. Has skills and experience related to business management, systems engineering, operations research, and management engineering. Typically requires specialization in particular software or business application utilized in an end user environment. Keeps abreast of technological developments and applications.	\$ 134.54
FUL041	Information Systems Auditor-Senior	Bachelor's Degree in Computer Science	6-9 yrs	Under general direction, audits the most complex new and existing information systems applications to ensure that appropriate controls exist, that processing is efficient and accurate, and that information systems procedures are in compliance with corporate standards. Competent to work at the highest level of all phases of information systems auditing.	\$ 62.79
FUL042	Information Systems Training Specialist - Senior	Bachelor's degree in Information Systems	6-9 yrs	Under general direction, organizes, prepares, and conducts complex training and educational programs for information systems or user personnel. May design and develop in-house programs. Maintains records of training activities, employee progress, and program effectiveness. Competent to work at the highest level of all phases of information systems training.	\$ 113.61



FUL107	<b>Interaction Designer/User Researcher/Usability Tester</b>	Bachelor's degree in computer science	0-3 yrs	<p>The Interaction Designer / User Researcher / Usability Tester is part of a highly collaborative, multi-disciplinary team focused on improving usability, user experience, and driving user adoption and engagement. They are responsible for conducting user research, analysis &amp; synthesis, persona development, interaction design, and usability testing to create products that delight our customers. Primarily responsible for:</p> <ul style="list-style-type: none"> <li>• Conduct stakeholder interviews, user requirements analysis, task analysis, conceptual modeling, information architecture, interaction design, and usability testing</li> <li>• Design and specify user interfaces and information architecture</li> <li>• Lead participatory and iterative design activities, including observational studies, customer interviews, usability testing, and other forms of requirements discovery</li> <li>• Produce user requirements specifications &amp; experience goals, personas, storyboards, scenarios, flowcharts, design prototypes, and design specifications</li> <li>• Effectively communicate research findings, conceptual ideas, detailed design, and design rationale and goals both verbally and visually</li> <li>• Plan and facilitate collaborative critiques and analysis &amp; synthesis working sessions</li> <li>• Work closely with visual designers and development teams to ensure that customer goals are met and design specifications are delivered upon</li> <li>• Designs and develops primarily internet/web pages and applications</li> <li>• Develops proof-of-concepts and prototypes of easy-to-navigate user interfaces (UIs) that consists of web pages with graphics, icons, and color schemes that are visually appealing</li> <li>• Researches user needs as well as potential system enhancements</li> <li>• Has familiarity to, or may actually: code, test, debug documents, and implement web applications using a variety of platforms</li> <li>• Planning, recruiting, and facilitating the usability testing of a system</li> <li>• Analyzing and synthesizing the results of usability testing in order to provide recommendations for change to a system</li> <li>• May create such artifacts as Usability Testing Plan, Testing Scripts, and Usability Testing Report</li> </ul>	\$ 160.45
FUL043	Internal Communications Systems Consultant	Bachelor's degree in Information Systems	6-9 yrs	<p>Provides systems guidance for current and proposed investments in telecommunications and network facilities and/or services from the development of communications software through financial implementation review. Researches present and future communication technologies. Works closely with system users to provide direction/assistance in identification and resolution of user problems. May supervise a group of planning analysts responsible for research/technical assistance for the user group. Typically requires eight to ten years of experience in telecommunications with emphasis on systems analysis, LAN/WAN telecommunications network design, and traffic engineering.</p>	\$ 97.67
FUL044	IT Subject Matter Specialist	PhD in Engineering	3-5 yrs	<p>Provides extremely high-level subject matter proficiency for work described in the task. Provides advanced technical knowledge and analysis of highly specialized applications and operational environment, high-level functional systems analysis, design, integration, documentation, training, and implementation advice on complex problems that require doctorate level knowledge of the subject matter for effective implementation.</p>	\$ 100.66

FUL045	LAN Administrator - Intermediate	Bachelor's degree in Information Technology..	3-5 yrs	Under general supervision, responsible for the acquisition, installation, maintenance, and usage of the organization's local area network. Manages LAN performance and maintains LAN security. Ensures that security procedures are implemented and enforced. Installs all network software. Evaluates, develops and maintains telecommunications systems. Troubleshoots LAN problems. Establishes and implements LAN policies, procedures, and standards and ensures their conformance with information systems and organization objectives. Trains users on LAN operation. Typically requires two to four years of experience. Frequently reports to a PC support manager or Senior LAN Administrator.	\$ 70.76
FUL046	LAN Support Technician - Intermediate	Bachelor's degree in Information Technology	6-9 yrs	Under general supervision, monitors and responds to technical control facility hardware and software problems utilizing hardware and software testing tools and techniques. May interface with vendor support service groups to ensure proper escalation during outages or periods of degraded system performance. May assist with installation of terminals and associated hardware. May provide LAN server support. Requires strong knowledge of PC/LAN communications hardware/software, in a multi-protocol environment, and network management software. Typically requires two to four years' experience in data communications troubleshooting.	\$ 59.80
FUL047	LAN Support Technician - Senior	Bachelor's Degree in Computer Engineering	6-9 yrs	Under general direction, monitors and responds to complex technical control facility hardware and software problems utilizing a variety of hardware and software testing tools and techniques. Provides primary interface with vendor support service groups or provides internal analysis and support to ensure proper escalation during outages or periods of degraded system performance. May provide LAN server support. Requires extensive knowledge of PC/LAN communications hardware/software in a multi-protocol environment and network management software. May function as lead position providing guidance and training for less-experienced technicians. Typically requires at least four years of experience in data communications troubleshooting.	\$ 65.78
FUL048	LAN/WAN Administrator	Bachelor's degree in Computer Science	3-5 yrs	Monitors LAN, WAN, and servers. Provides batch monitoring, tape back-up, and restoration. Administers mail system and implements new database architecture. Monitors and conducts performance evaluation of networks. Supports, installs, maintains, and troubleshoots all local area and wide area networking devices and related software for branch offices and internal and external networks.	\$ 70.76
FUL049	LAN/WAN Integrator	Bachelor's Degree In General Engineering	3-5 yrs	L Responsible for the overall integration of the enterprise-wide network including the planning, design, installation, maintenance, management, and coordination of the corporate LAN/WAN (may include local, metropolitan, and wide area networks). Has responsibility for technical architecture and recommendations related to LAN/WAN. Is typically a top-level technical contributor with advanced knowledge and experience in the area of local and wide area networking, communications, and related hardware/software. Maintains high level of technical expertise and studies vendor products to determine those which best meet organization needs. Presents information to management, which may result in the purchase and installation of hardware, software, and telecommunications equipment. Recommends network security procedures and policies. Knowledgeable in a multi-platform operating environment. May work with Voice and/or Data Communications Analysts. LAN/WAN Integrator.	\$ 84.71
FUL050	LAN/WAN/MAN Administrator	Bachelor's degree in Engineering	3-5 yrs	Monitors LAN, WAN, MAN, and servers. Provides batch monitoring, tape back-up, and restoration. Supports, installs, maintains, and troubleshoots all local area and wide area networking devices and related software for branch offices and internal and external networks	\$ 72.75

FUL051	Network Engineer - Intermediate	Bachelor's degree in computer science	3-5 yrs	Under general supervision, oversees the purchase, installation, and support of network communications, including LAN/WAN systems. Works on problems of diverse scope where analysis of situation requires evaluation and judgment. Responsible for evaluating current systems. Assists in the planning of large-scale systems projects through vendor comparison and cost studies. Requires thorough knowledge of LAN/WAN systems, networks, and applications. Typically requires two to five years of experience.	\$ 94.68
FUL052	Network Engineer - Senior	Bachelor's in computer science	6-9 yrs	Under general direction, manages the purchase, installation, and support of network communications, including LAN/WAN systems. Responsible for evaluating current systems. Works on complex problems where analysis of situation requires in-depth evaluation of various factors. Plans large-scale systems projects through vendor comparison and cost studies. Provides work leadership and training to lower level network engineers. Requires expert knowledge of LAN/WAN systems, networks, and applications. Typically requires at least five years of experience.	\$ 119.59
FUL053	Network Operations Supervisor	Bachelor's degree in computer science	10-12 yrs	Provides first level guidance/direction (either as a full-time supervisory position or on a project management basis) to network operation and maintenance analysts, technicians, and/or engineers. Performs technical analysis of complex software, hardware, and transmission facility using various diagnostic tools in support of efficient network operations. Provides guidance/direction for engineering efforts and test and evaluation programs. Performs on-site engineering when required. Typically requires five years of experience in operations, maintenance, and sustained engineering of LAN to WAN internetworking. Frequently reports to a Regional Manager or Operations Manager.	\$ 101.65
FUL054	Network Planning Analyst - Intermediate	Bachelor's degree in Information Technology	3-5 yrs	Under general supervision, plans and evaluates moderately complex existing network systems and makes recommendations for resources required to maintain and/or expand service levels. Provides assistance in network planning, engineering, architecture, and the development of technical standards and interface applications. Evaluates new products as assigned. Provides resolution for network problems. Typically requires four to six years of experience in telecom networks. Frequently reports to a higher Network Planning position or a Telecommunications Department Director/Manager.	\$ 91.69
FUL055	Network Planning Analyst - Senior	Bachelor's Degree in Information Technology.	6-9 yrs	Under general direction, plans and evaluates complex existing network systems and makes recommendations for resources required to maintain and/or expand service levels. Provides highly skilled technical assistance in network planning, engineering, and architecture. Develops technical standards and interface applications, identifies and evaluates new products, and provides resolution for network problems. May interface with vendors to identify and purchase hardware and software. May function as lead position for other Network Planning Analysts. Typically requires six to eight years of experience in telecom networks. Frequently reports to a Telecommunications Department Director/Manager or a higher Network Planning position	\$ 107.63
FUL056	Network Planning Manager	Bachelor's Degree Information Technology	3-9 yrs	Responsible for long-term strategic planning to ensure network capacity meets current and future network requirements including planning for remote hardware and communications facilities, development and implementation of methodologies for system analysis, installation, and support. Defines and develops methodology to ensure compatibility of all software and hardware products at each facility. Provides ongoing coordination in the analysis, acquisition, and installation of remote hardware and software. May supervise Network Planning Analysts. Typically requires six to eight	\$ 109.63

				years of experience. Frequently reports to a Telecommunications Department Director/Manager or Planning and Engineering Manager.	
FUL057	Network Systems Administrator	Bachelor's degree in Information Technology	3-5 yrs	Provides system administration of Network, Web, and/or communication systems, including Local Area Network (LAN) and Wide Area Network (WAN). J-18 systems, involving network security. Prepares technical implementation plans that provide integrated solutions including actions, milestones, timelines and critical paths required for complete solutions.	\$ 76.74
FUL058	Network Systems Manager	Bachelor's degree in computer science	3-5 yrs	Supervises all personnel engaged in the operation and support of network facilities, including all communications equipment in large scale or multi-shift operations. Supervises complex operations that involve two or more additional functions such as, but not limited to, network operations, systems security, systems software support, and production support activities.	\$ 86.70
FUL059	Network/Hardware Support Technician	Bachelor's degree in computer science	6-9 yrs	Monitors and responds to hardware, software, and network problems. Provides the routine testing and analysis of all elements of the network facilities (including power, software, communications machinery, lines, modems, and terminals). Monitors and controls the performance and status of the network resources.	\$ 68.77
FUL060	Operations Manager - Data Communications	Bachelor's Degree In Information Technology	10-12 yrs	Manages all aspects of the daily operation for data network(s) in either a stand-alone data network environment in a voice and data separated network environment. Develops project plans for the implementation of new telecommunications technology and systems. Directs technical analysis of complex software, hardware, and transmission systems. Coordinates with vendors involved in providing communication activities	\$ 108.63
FUL061	Operations Systems Manager	Bachelor's degree in computer science	6-9 yrs	Provides assistance and oversight for all information systems operations activities, including computer and telecommunications /communications operations, data entry, data control, operations support, operating systems programming, system security policy procedures, and/or web strategy and operations. Provides input to policy level discussions regarding standards and budget constraints.	\$ 91.69
FUL062	Operations / Technical Support Manager	Bachelor's Degree in computer system/network engineering	1-5 yrs	Provides technical guidance for directing and monitoring information systems operations. Implements machine modifications to increase the capacity of the system. Directs compilation of records and reports concerning production, machine malfunctioning and maintenance.	\$ 93.68
FUL063	Operations/Network LAN Administrator	Bachelor's in computer science	8-10 yrs	Supports, monitors, tests, and troubleshoots hardware and software problems pertaining to LAN. Recommends and schedules repairs. Provides end users support for all LAN-based applications. Installs and configures workstations.	\$ 70.76
FUL064	Operations/Technical Support Analyst	Associate Degree in data processing	6-9 yrs	Provides technical guidance for directing and monitoring information systems operations. Implements machine modifications to increase the capacity of the system. Directs compilation of records and reports concerning production, machine malfunctioning and maintenance.	\$ 102.65
FUL065	PC/LAN Mgmt Analyst – Senior	Bachelor's degree in a computer science	5-9 yrs	Under general direction, provides consultation to business area management and staff at the highest technical level for all aspects of PC/LAN design and configuration in a multi-server environment. Plans and coordinates the installation of new or modified Local Area Networks and installs and coordinates the resolution of network problems or malfunctions. Provides technical support and guidelines to client and systems areas through documentation. Requires experience with Token Ring.	\$ 101.65

FUL105	Product Manager	Bachelor's degree in computer science	0-3 yrs	<p>Experience managing the delivery, ongoing success, and continuous improvement of one or more digital products and/or platforms.</p> <p>Primarily responsible for:</p> <ul style="list-style-type: none"> <li>• Lead one or more multi-disciplinary agile delivery teams to deliver excellent new products and/or iterations to existing products to meet user needs</li> <li>• Gather user requirements based on a communicable understanding of diverse audience groups</li> <li>• Define and get stakeholder buy-in for product definition and delivery approach</li> <li>• Create effective, prioritized product descriptions, and delivery plans to meet user needs in a cost-effective way</li> <li>• Interpret user research in order to make the correct product decisions, noting that users do not always know what they want</li> <li>• Continually keep abreast of changes to user habits, preferences, and behaviors across various digital platforms and their implications for successful delivery of government digital services</li> <li>• Underpin the delivery and iteration of digital services through effective analysis of qualitative and quantitative user data</li> <li>• Communicate credibly with a wide range of digital delivery disciplines and talent</li> </ul>	\$ 221.88
FUL066	Project Engineer	Bachelor's degree in computer science	3-5 yrs	<p>Manages long-term IT engineering projects. Performs engineering design evaluations and works to complete projects within budget and scheduling restraints. Develops, implements, and monitors information systems policies and controls to ensure data accuracy, security, and regulatory compliance. Reviews reports of computer and peripheral equipment production, malfunction, and maintenance to determine and address problems.</p>	\$ 119.59
FUL067	Project Manager – Senior	Bachelor's in computer science	6-9 yrs	<p>Responsible for all aspects of the development and implementation of assigned projects and provides a single point of contact for those projects. Takes projects from original concept through final implementation. Interfaces with all areas affected by the project including end users, computer services, and client services. Defines project scope and objectives. Develops detailed work plans, schedules, project estimates, resource plans, and status reports. Conducts project meetings and is responsible for project tracking and analysis. Ensures adherence to quality standards and reviews project deliverables. Manages the integration of vendor tasks and tracks and reviews vendor deliverables. Provides technical and analytical guidance to project team. Recommends and takes action to direct the analysis and solutions of problems.</p>	\$ 68.79
FUL068	Quality Assurance Analyst - Intermediate	Bachelor's degree in computer science	7-9 yrs	<p>Under general supervision, carries out procedures to ensure that all information systems, products and services meet minimum organization standards and end-user requirements. Thoroughly tests software to ensure proper operation and freedom from defects. Documents and works to resolve all problems. Reports progress on problem resolution to management. Devises improvements to current procedures and develops models of possible future configurations. Performs workflow analysis and recommends quality improvements. Frequently reports to a Quality Assurance Manager.</p>	\$ 55.81



FUL069	Quality Assurance Analyst - Senior	Bachelor's degree in computer science	7-15 yrs	Under general direction, carries out procedures to ensure that all information systems, products and services meet organization standards and end-user requirements. Performs and leads tests of software to ensure proper operation and freedom from defects. May create test data for applications. Documents and works to resolve all complex problems. Reports progress on problem resolution to management. Devises improvements to current procedures and develops models of possible future configurations. Acts as information resource about assigned areas to technical writers and other Quality Assurance Analysts. Performs complex workflow analysis and recommends quality improvements. Frequently reports to a Quality Assurance Manager.	\$ 59.80
FUL070	Quality Assurance Specialist	Bachelor's degree in computer science	6-9 yrs	Provides development of project Software Quality Assurance Plan and the implementation of procedures that conforms to the requirements of the contract. Provides an independent assessment of how the project's software development process is being implemented relative to the defined process and recommends methods to optimize the organization's process.	\$ 59.80
FUL071	Security Coordinator	Bachelor's degree in Information Technology	3-5 yrs	Coordinates, develops, and evaluates security programs for an organization.	\$ 121.59
FUL119	Site Manager / Site Supervisor	Bachelor's Degree In computer engineering	0-5 yrs	Provides applications systems analysis and programming activities for a Government site, facility or multiple locations as directed by Program Manager. Prepares long and short-range plans for application selection, systems development, systems maintenance, and production activities and for necessary support resources.	\$ 72.75
FUL073	Software Architect	Bachelor's degree in engineering	5-7 yrs	Works independently designing and developing new software products or major enhancements to existing software. May lead a large development team in the design of highly complex software systems. Acts as highest-level technical expert, addressing problems of systems integration, compatibility, and multiple platforms. Responsible for project completion. Performs feasibility analysis on potential future projects to management.	\$ 128.56
FUL074	Software Developer – Senior	Master's degree in Computer Science	5-7 yrs	Under general direction, participates as high-level technical expert in design development, coding, testing, and debugging new software or significant enhancements to existing software. Works with technical staff to understand problems with software and develops specifications to resolve them. Resolves customer complaints and responds to suggestions for improvements and enhancements. Participates in the development of software user manuals. May act as team leader on less complex projects. Assists in training less experienced software development staff. Requires five years' experience in the field.	\$ 85.71
FUL075	Software Systems Engineer - Intermediate	Bachelor's degree in computer science	3-5 yrs	Under general supervision, works from specifications to develop or modify moderately complex software programming applications. Assists with design, coding, benchmark testing, debugging, and documentation of programs. Applications generally deal with utility programs, position control language, macros, subroutines, and other control modules. Competent to work on most phases of software systems programming applications, but requires instruction and guidance in other phases.	\$ 100.66

FUL076	Software Systems Engineer - Senior	Bachelor's Degree in computer science	6-9 yrs	Under general direction, formulates and defines specifications for complex operating software programming applications or modifies/maintains complex existing applications using engineering releases and utilities from the manufacturer. Designs, codes, tests, debug, and document those programs. Responsible for applications dealing with the overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting, and advanced mathematical/scientific software packages. Competent to work at this highest technical level on all phases of software systems programming applications. May have responsibility for the evaluation of new and existing software products. May assist other systems programmers to effectively utilize the system's technical software.	\$ 97.67
FUL077	Strategic Planner	Bachelor's degree in Information Technology	3-5 yrs	Provides strategic planning of large projects or a significant segment of a strategic planning portion of a large complex project. Provides the overall approach to clarify mission statements so they can be used as springboards in envisioning their desired future. Assists in developing mission and vision statements, subsequent goal delineation, provides guidance for building operational plans and specifying measurable outcomes to include capital outlay planning efforts in a consolidated strategic planning process and prioritizes those initiatives.	\$ 44.85
FUL078	Systems Administrator - Intermediate	Bachelor's Degree In computer engineering	3-5 yrs	Under general supervision, responsible for installing, configuring, and maintaining operating system workstations and servers, including web servers, in support of business processing requirements. Performs software installations and upgrades to operating systems and layered software packages. Schedules installations and upgrades and maintains them in accordance with established IT policies and procedures. Monitors and tunes the system to achieve optimum performance levels. Ensures workstation/server data integrity by evaluating, implementing, and managing appropriate software and hardware solutions. Ensures data/media recoverability by implementing a schedule of system backups and database archive operations. Supports media management through internal methods and procedures or through offsite storage and retrieval services. Develops and promotes standard operating procedures. Conducts routine hardware and software audits of workstations and servers to ensure compliance with established standards, policies, and configuration guidelines. Develops and maintains a comprehensive operating system hardware and software configuration database/library of all supporting documentation.	\$ 90.69
FUL079	Systems Administrator - Senior	Bachelor's Degree Information Technology	6-9 yrs	Under general direction, responsible for activities related to system administration. Assigns personnel to various projects, directs their activities, and evaluates their work. Ensures long-term requirements of systems operations and administration are included in the overall information systems planning of the organization. Responsible for the installation, maintenance, configuration, and integrity of computer software. Implements operating system enhancements that will improve the reliability and performance of the system.	\$ 124.58
FUL080	Systems Analysis and Programming Director	Bachelor's degree in computer science	6-9 yrs	Develops software within an organization. Directs the software engineering function in developing, releasing, and maintaining software applications/operating systems according to business needs.	\$ 138.53

FUL081	Systems Engineer	Bachelor's degree in computer science.	10-15 yrs	Performs a variety of systems engineering tasks and activities that are broad in nature and are concerned with major systems design, integration, and implementation, including personnel, hardware, software, budgetary, and support facilities and/or equipment. Provides quality assurance review and the evaluation of new and existing software products.	\$ 98.66
FUL082	Systems Management Technologist	Associate's degree in Information Technology	2-5 yrs	Analyzes, develops, operates, and maintains software libraries and catalogs. Provides support and direction for user groups in the use of the software/hardware systems and programs to support an integrated system.	\$ 59.80
FUL106	Technical Architect	Bachelor's degree in computer science	0-3 yrs	<p>Experience serving as the manager of complex technology implementations, with an eye toward constant reengineering and refactoring to ensure the simplest and most elegant system possible to accomplish the desired need.</p> <p>Understands how to maximally leverage the open source community to deploy systems on infrastructure as a service provider. Comfortable with liberally sharing knowledge across a multi-disciplinary team and working within agile methodologies. A full partner in the determination of vision, objectives, and success criteria.</p> <p>Primarily responsible for:</p> <ul style="list-style-type: none"> <li>Architecting the overall system, by using prototyping and proof of concepts, which may include: <ul style="list-style-type: none"> <li>modern programming languages (e.g., Ruby, Python, Node.js) and web frameworks (e.g., Django, Rails)</li> <li>modern front-end web programming techniques (e.g., HTML5, CSS3, RESTful APIs) and frameworks (e.g., Twitter Bootstrap, jQuery)</li> <li>relational databases (e.g., PostgreSQL), and "NoSQL" databases (e.g., Cassandra, MongoDB)</li> <li>automated configuration management (e.g., Chef, Puppet, Ansible, Salt), continuous integration/deployment, and continuous monitoring solutions</li> </ul> </li> <li>Use of version control systems, specifically Git and GitHub <ul style="list-style-type: none"> <li>Ensuring strategic alignment of technical design and architecture to meet business growth and direction, and stay on top of emerging technologies</li> </ul> </li> <li>Decomposing business and system architecture to support clean-interface multi-team development</li> <li>Developing product roadmaps, backlogs, and measurable success criteria, and writing user stories (i.e., can establish a path to delivery for breaking down stories)</li> <li>Clearly communicates and works with stakeholders at every level</li> </ul>	\$ 231.05
FUL083	Technical Writer	Bachelor's Degree in Technical Communications	2-5 yrs	Writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses. Coordinates the display of graphics and the production of the document.	\$ 39.86
FUL084	Telecommunications Engineer/Analyst – Intermediate	Associates degree in Computer Science.	3-5 yrs	Under general supervision, responsible for moderately complex engineering and/or analytical activities associated with one or more technical areas within the telecom function (such as, but not limited to, network design, engineering, implementation, or operations/user support). Typically requires two to four years of technical telecom experience.	\$ 80.73



FUL085	Telecommunications Engineer/Analyst – Senior	Bachelor's degree in communications	6-9 yrs	Under general direction, responsible for complex engineering and/or analytical tasks and activities associated with one or more technical areas within the telecom function such as, but not limited to, network design, engineering, implementation, or operations/user support. Typically requires six to eight years of technical telecom experience.	\$ 88.70
FUL086	Telecommunications Manager - Multiple Incumbents	Bachelor's degree in computer science	5-9 yrs	A multiple incumbent position with broad management responsibility for all areas of the telecommunications function. Position may be structured to address the needs of individual “customer” groups (e.g., organization divisions or business lines) or may reflect total management responsibilities (including planning, engineering, implementation, and operations) for either voice or data communications in a separated network environment. Manages/coordinates day-to-day planning, design, operations, maintenance, and resource allocation including client server support and strategic and tactical planning. Coordinates with customers, vendors, and corporate management. May be responsible for billing systems. Interfaces with Senior/Executive Management to coordinate telecommunications plans with overall business plan. Frequently reports to Telecommunications Management or information systems management.	\$ 98.66
FUL087	Telecommunications Manager - Single Incumbent	Bachelor's degree in Computer Science	5-9 yrs	A single incumbent position with broad management responsibility for all areas of the telecommunications function. Manages and coordinates the day-to-day planning, design, operations, and maintenance of the telecommunications voice and/or data networks including client server support consistent with customer needs, organization objectives, and technological resources. Responsible for telecommunications strategic and tactical planning. Coordinates with customers, vendors, and corporate management. Responsible for department resource allocation. May be responsible for billing systems. Interfaces with Senior/Executive Management to coordinate telecommunications plans with organization's business plan.	\$ 93.68
FUL088	Telecommunications Network Help Desk	Associates Degree in Computer Science	3-5 yrs	Responds to user complaints to research complex problems associated with the organization's telecommunications networks (voice and/or data). Diagnoses problem source through discussions with users. Coordinates with internal company support and operations groups and/or with vendors to resolve problems. Follows up with users to ensure problem has been resolved. Develops supporting documentation of all activities.	\$ 47.84
FUL089	Telecommunications Programmer/Systems Analyst – Senior	Bachelor's degree in computer science	6-9 yrs	Under general direction, develops telecommunications software solutions to address user needs. Interfaces with users to define needs. Designs, develops, and tests complex communications software interface programs. Primary responsibilities usually include technical feasibility studies and design phases of project. Requires strong knowledge of communication protocols, hardware, and real time operating system programming. May serve as project leader for lower level programmers. Requires high level of proficiency in one or more programming languages such as Assembler, FORTRAN, or “C”. Typically requires four to six years of experience in telecommunications programming.	\$ 72.75
FUL090	Telecommunications/Communications Integration Engineer	Bachelor's degree in computer science	3-5 yrs	Provides technical direction and analysis for telecommunication activities, including planning, designing, integrating, installing and maintaining large-scale telecommunications / communications networks and services with computer systems. Applies telecommunications/communications engineering principles and theory to propose design and configuration alternatives. Analyzes network performance, usage and traffic flows, accesses and interfaces, transmission techniques, and protocols	\$ 73.75

				to interface with computer systems.	
FUL091	Test Engineer	Bachelor's in computer science.	3-5 yrs	Subject matter specialist providing testing know-how in for the support of user requirements of complex to highly complex software/hardware applications. Directs and/or participates in all phases of risk management assessments and software/hardware development with emphasis on analysis of user requirements, test design and test tools selection.	\$ 60.79
FUL092	UNIX Systems Administrator	Bachelor's degree in computer science	3-5 yrs	Perform routine tasks under the direct supervision of a more experienced administrator. Be the front-line interface for users; accepting problem reports and passing them to the appropriate system administrators. Performs some security functions, especially monitoring the system.	\$ 67.77
FUL109	Visual Designer Category	Bachelor's degree in computer science	0-3 yrs	<p>The Visual Designer starts with a deep understanding of the goals of customers and the business so that they can create experiences that delight. Visual Designers will be well-versed in all aspects of current visual design standards and trends and will be responsible for managing project design reviews, resource planning, and execution for all project work related to visual design.</p> <p>Primarily responsible for:</p> <ul style="list-style-type: none"> <li>• Oversees all visual design efforts</li> <li>• Guides, mentors, and coaches team members while leading projects to successful completion</li> <li>• Develops and maintains relationships with key peers in Marketing, Branding, UX leaders, IT leaders, and others to identify and plan creative solutions</li> <li>• Manages external service resources and budgets for visual design</li> <li>• Ensures successful completion of all work executed by the team (on time, on budget, and ensuring quality)</li> <li>• Ensures compliance with the project management methodologies and the Project Management Office processes and standards</li> <li>• Develops, maintains, and ensures compliance of application release management, outage control processes and standards</li> <li>• Defines, creates, communicates, and manages resource plans and other required project documentation such as style guides and provides updates as necessary</li> </ul>	133.8639798
FUL093	Voice Communications Administrator	Associates Degree in communications	3-5 yrs	Monitors and responds to facility hardware and software problems. Assists vendor support service groups to ensure proper escalation during outages or periods of degraded system performance. Makes phone system additions, changes, and installs new station equipment. Requires knowledge of monitoring equipment.	\$ 49.83
FUL094	Voice Communications Manager - Planning & Implementation	Associates Degree in Communications	5-7 yrs	Ensures that adequate and appropriate planning is provided for remote hardware and communications facilities to develop and implement methodologies for analysis, installation, and support of voice communications systems. Provides coordination in the analysis, acquisition, and installation of remote hardware and software. Interfaces with internal and external customers and vendors to determine system needs. Manages the training and efforts of a staff responsible for system and network planning and analysis activities. May include billing/chargeback responsibilities. Typically requires at least eight to ten years of experience in software/hardware voice network design and analysis usually in a	\$ 56.81

				telephone operating organization. Frequently reports to a Telecommunications Department Director/Manager or Planning and Engineering Manager.	
FUL095	Voice Communication s Technician	Associates Degree in Communications	3-5 yrs	Monitors and responds to complex technical control facility hardware and software problems. Interfaces with vendor support service groups to ensure proper escalation during outages or periods of degraded system performance. Maintains PBX/systems and associated hardware.	\$ 67.77
FUL096	Web Content Analyst	Bachelor's degree in Graphic Design, or Graphic Communications	3-5 yrs	Provides for development and content that will motivate and entertain users so that they regularly access the website and utilize it as a major source for information and decision-making. Provides managing/performing website editorial activities including gathering and researching information that enhances the value of the site.	\$ 53.82
FUL097	Web Designer	Bachelor's degree in Graphic Design, or Graphic Communications	3-5 yrs	Under direct supervision, designs and builds web pages using a variety of graphics software applications, techniques, and tools. Designs and develops user interface features, site animation, and special effects elements. Contributes to the design group's efforts to enhance the appeal of the organization's online offerings. Designs the website to support the organization's strategies and goals relative to external communications. Typically requires one to three years of experience in the area of web design. Requires knowledge of web-based technologies including browsers ASP pages, HTML code, object-oriented technology, and graphics software.	\$ 47.84
FUL098	Web Marketing Manager	Bachelor's Degree in computer science	3-5 yrs	Responsible for developing and implementing the organization's web strategies for promoting products and services through strategic marketing on the website. Responsible for assisting in the creation and implementation of the web marketing plan. Works closely with design and content management team to ensure site meets marketing objectives. Monitors site access patterns to adjust strategies and plans. Requires understanding of web technologies.	\$ 39.86
FUL099	Web Operations Manager	Bachelor's Degree in computer science	3-5 yrs	Responsible for ongoing oversight of web strategy and operations. Develops business plan and annual budget for website function. Accountable for budget, staff planning, management, and product and service delivery. Oversees operational activities of the website(s) with specific attention aimed at content creation and website maintenance. Requires experience with web technologies and web page design.	\$ 72.75
FUL100	Web Project Manager	Bachelor's Degree in computer science	3-5 yrs	Serves as project manager of a development team responsible for planning, developing, and deploying websites including preparation of text, graphics, audio, and video for web pages. Works directly with partners and clients to determine project scope and specifications. Coordinates the work of design and development teams to implement online designs. Reviews progress, manages resources, and ensures overall quality of completed website. Typically requires experience in management and understanding of web technologies.	\$ 67.77

FUL101	Web Security Administrator	Bachelor's degree in security and intelligence	3-5 yrs	Under general supervision, performs all procedures necessary to ensure the safety of the organization's website and transactions across the Internet including the protection of confidential order information and external business-to-business connections. Applies Internet firewall and encryption technologies to maintain organizational and customer security. Ensures that the user community understands and adheres to established security procedures. Updates and deletes users, monitors and performs follow-up compliance violations, and develops security policies and practices and guidelines. Requires experience in Firewall/DMZ design and implementation.	\$ 75.74
FUL102	Web Security Analyst	Master's degree in security and intelligence	3-5 yrs	Performs all procedures necessary to ensure the safety of the organization's website and transactions across the Internet/intranet. Applies Internet firewall technologies to maintain security. Ensures that the user community understands and adheres to necessary procedures to maintain security. Updates and deletes users, monitors and performs follow-up on compliance violations, and develops security policies, practices, and guidelines.	\$ 72.75
FUL103	Web Software Developer	Bachelor's degree in computer science	6-9 yrs	Designs, develops, troubleshoots, debugs, and implements software code (such as HTML, CGI, and JavaScript) for a component of the website. Works with graphic designers and other members of a project team to develop the site concept, interface design, and architecture of the website. Responsible for interface implementation. Integrates web applications with backend databases. Deploys large web-based transaction systems using application servers. Researches, tests, builds, and coordinates the integration of new products per production and client requirements. Requires strong navigation and site-design instincts. Requires development experience in web-based languages.	\$ 74.75
FUL104	Web Technical Administrator	Bachelor's Degree in Information Technology	3-5 yrs	Under general supervision, responsible for achieving overall technical integrity of organization's website. Maintains and upgrades hardware and software including website technical architecture related to hardware and telecommunication connectivity. Administers e-mail, chat and FTP services. Communicates router configuration changes and troubleshoots system errors and bugs. Maintains servers, creates monitoring reports and logs, and ensures functionality of links. Creates tools to ease production process. Automates routine procedures. Works on system-level services to ensure proper patch levels on applications and operating systems. Monitors database integrity. Monitors site for acceptable performance and user accessibility. Establishes backups and monitors site security. Typically requires experience in systems technologies.	\$ 54.81

FUL108	Writer/Content Designer/Content Strategist	Bachelor's degree in computer science	0-3 yrs	<p>Experience developing the strategy and execution of content across digital channels. Primarily responsible for:</p> <ul style="list-style-type: none"> <li>• Improves content creation efforts by helping to lead the research &amp; development of interactive and experiential storytelling for projects</li> <li>• Advise how to improve the ongoing iteration of content models</li> <li>• Collaborate with designers and other content strategists to improve how the effectiveness of digital, print, and other content is measured</li> <li>• Develop and maintain appropriate voice for produced content</li> <li>• Advise how to streamline content production and management solutions and processes, based on user research</li> <li>• Assign, edit, and produce content for products, services, and various projects</li> <li>• Plan and facilitate content strategy workshops and brainstorming sessions on developing content and content services (including API development)</li> <li>• Collaborate closely with developers and designers to create, test, and deploy effective content marketing experiences using the Agile method of software development</li> <li>• Offer educated recommendations on how to deliver a consistent, sustainable and standards-driven execution of content strategy across products, services, and projects</li> <li>• Collaborate with content managers, writers, information architects, interaction designers, developers, and content creators of all types</li> <li>• Participate, as needed, on an Agile software development scrum teams</li> </ul>	\$ 144.60
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